Sept. 15, 1942. K. C. GRIGSBY 2,295,839

OVERHEAD CHIMNEY DAMPER

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Fig. 1

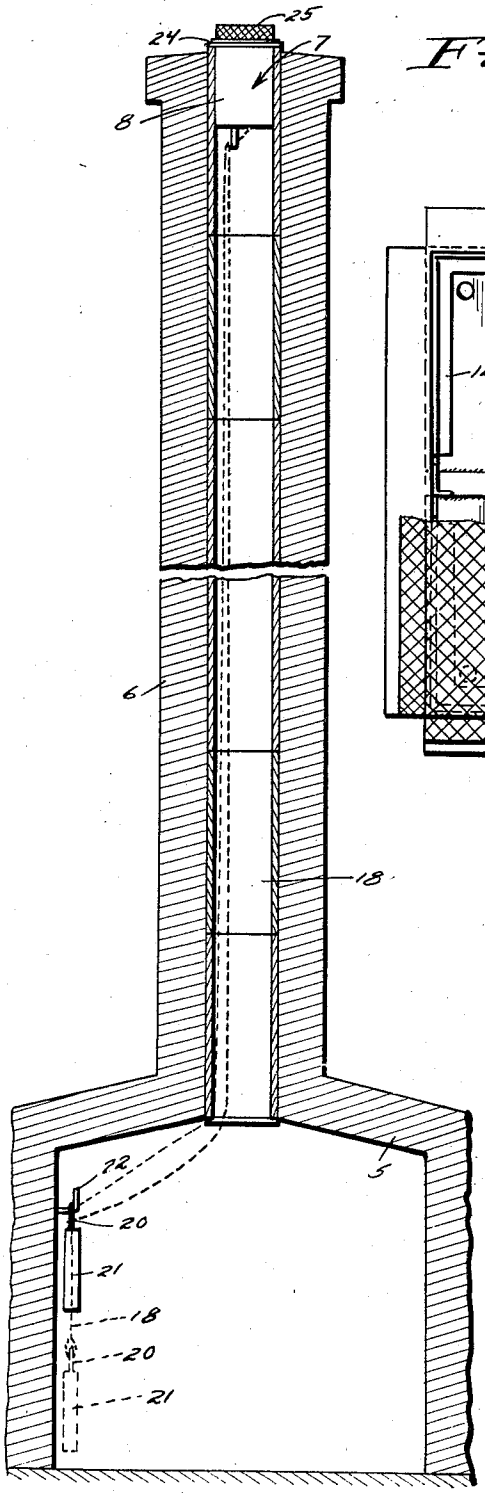


Fig. 2.

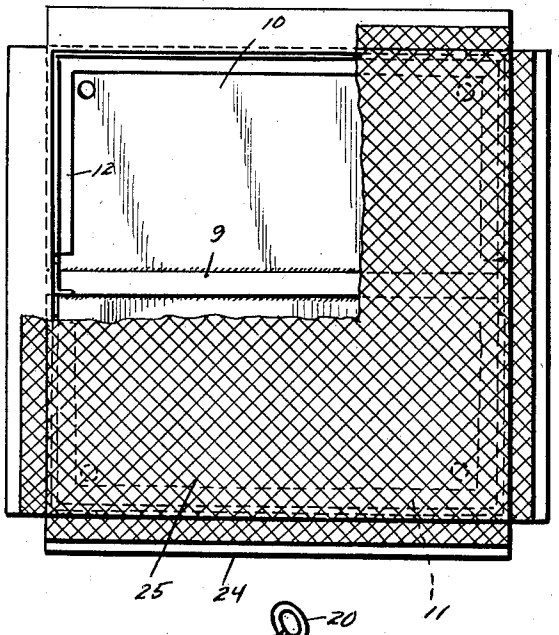




Fig. 7.

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Fig. 4.

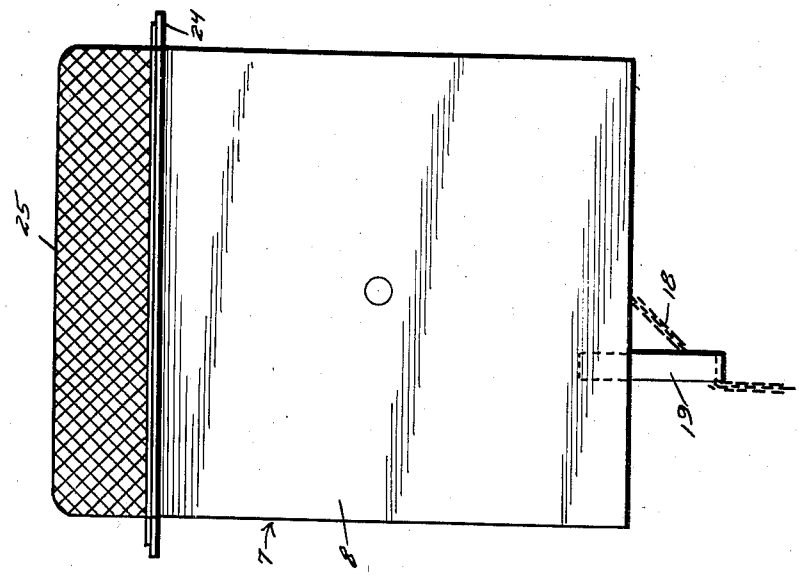
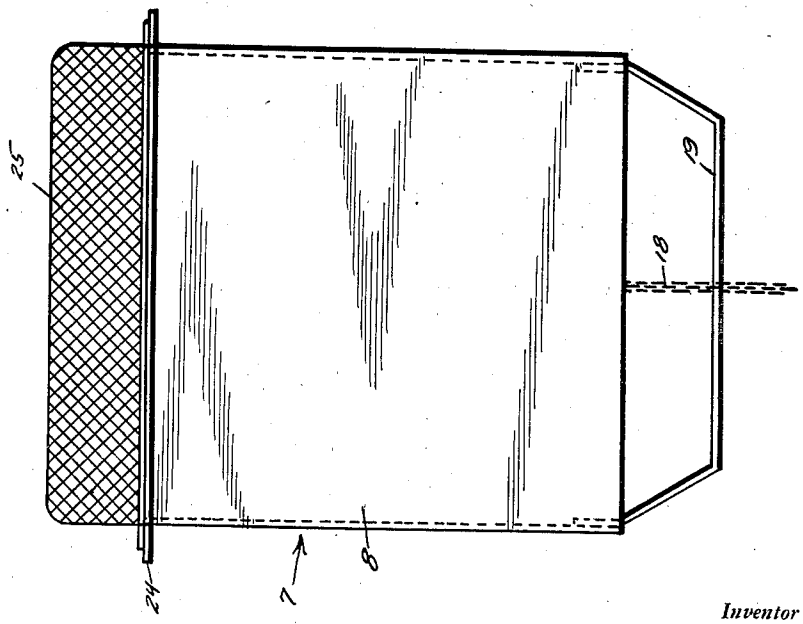


Fig. 3.



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Fig. 6.

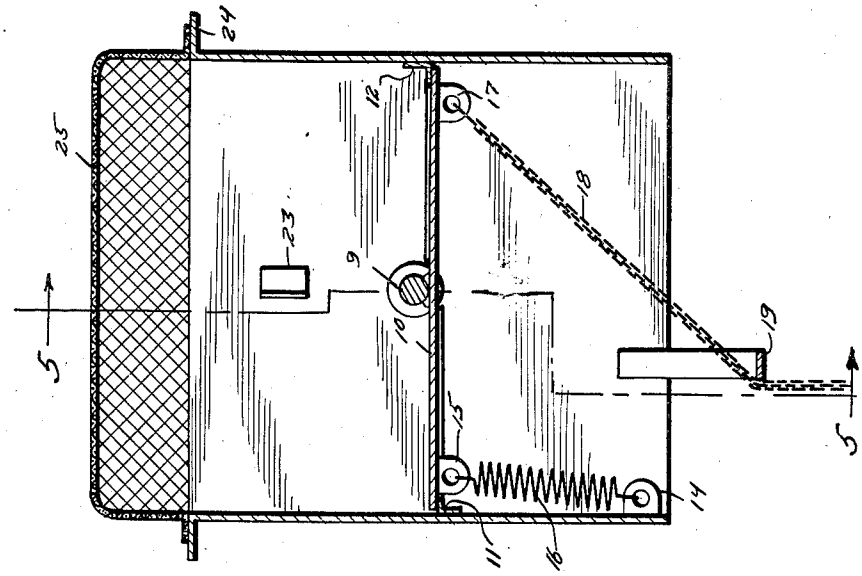
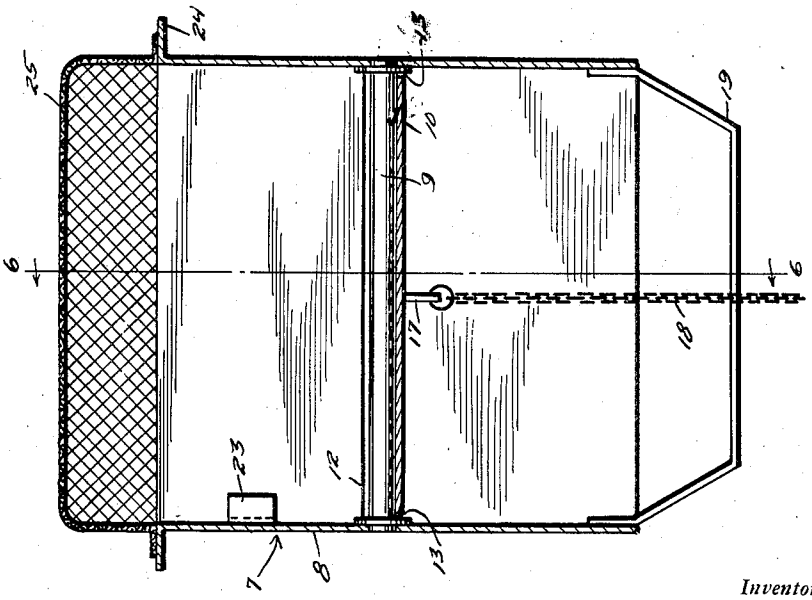


Fig. 5.



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UNITED STATES PATENT OFFICE

2,295,839

OVERHEAD CHIMNEY DAMPER

Kermen C. Grigsby, Waukegan, Ill.

Application March 25, 1941, Serial No. 385,171

1 Claim. (Cl. 98—59)

This invention relates to new and useful improvements in chimney dampers and more particularly to a damper for installation at the top of a chimney especially in instances where the chimney is used for fireplaces.

An important object of the invention is to provide a damper for the upper end of chimneys to eliminate any downdraft whatsoever, which at present causes soot settlement on rugs, furniture, draperies and other household furniture.

Another important object of the invention is to provide a damper for the upper end of chimneys which will serve to close off the chimney and prevent loss of radiated heat caused by updraft when the fireplace is not in use.

Other objects reside in the provision of means for the exclusion of insects and other creatures, to reduce the fire hazard of sparks emanating from the chimney and others which will become apparent to the reader of the following specification.

In the drawings:

Figure 1 represents a vertical sectional view through a chimney and fireplace showing the damper installed.

Figure 2 is a top plan view of the damper with a portion broken away.

Figure 3 is a side elevational view of the damper.

Figure 4 is a side elevational view of the damper looking at a side portion ninety degrees removed from that shown in Figure 3.

Figure 5 is a vertical sectional view through the damper taken substantially on the line 5—5 of Figure 6.

Figure 6 is a vertical sectional view taken substantially on line 6—6 of Figure 5.

Figure 7 is a perspective view of the weight.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 denotes a fireplace from which rises a chimney 6. The damper unit generally referred to by numeral 7 forms the present invention and is installed at the extreme upper end of the chimney 6.

As can be clearly seen in Figures 5 and 6, the unit 7 consists of a shell 8 open at its upper and lower ends and having a cross shaft 9 therein with its ends journaled in openings of opposed side walls of the shell. Numeral 10 denotes a damper plate welded or otherwise secured at an intermediate portion to the shaft 9 and when in closed position has one end resting on a shelf 11 while its other end bears against a cleat 12. As is apparent in Figures 5 and 6 some clearance 13 is allowed between the side walls of the shell 8 and the side edges of the damper plate 10.

Ears 14 and 15 are provided on the inside of the shell 8 and one end of the damper plate 10 and between these ears is connected a tension spring 16 which serves to hold the damper plate in the closed position shown in Figure 6. An ear 17 is provided at the other end of the damper plate 10 and has a chain 18 or other elongated flexible element extending therefrom and across a guide 19 which depends from the lower portion of the shell 8. This chain extends down the chimney to an eye 20 on a weight 21. When this eye 20 is engaged over a hook 22 projecting from a side wall of the fireplace 5, the chain 18 will be loosened so that the spring 16 will serve to maintain the damper plate 10 in closed position. However, when the eye 20 is removed from the hook 22, the weight will gravitate to the position shown in Figure 1 in broken lines, pulling open the damper plate 10 as is desired when the fireplace 5 is to be used. As shown in Figure 1, the hook 22 acts as a guide for the chain 18, so as to keep the weight 21 toward one side of the fireplace.

A stop lug 23 is provided on one side wall of the shell 8 to limit opening movement of the plate 10.

The upper end of the shell 8 is provided with an outwardly disposed flange 24 upon which sits a foraminous dome 25 which serves to break up sparks and under all circumstances prevent insects from entering the chimney. The dome 25 can be spot-welded to the flange 24.

Another purpose for the grill or foraminous dome 25 is the fact that cross currents of air passing over the flue are cooled, the cooled air striking the grill thus creating a lower temperature on the grill which is conducted downwardly through the metal walls, thus eliminating hazards of overheating and warping of the damper.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

In combination with a chimney, a damper unit comprising a shell fitted into the top of the chimney, a central transverse rock shaft in said shell, a damper plate in said shell fixed to said shaft and centered relative thereto for opening

and closing movement into vertical and horizontal positions, respectively, a coil spring connected to one side of the damper plate and to said shell for moving the plate toward closing position, an abutment ledge in said shell for limiting closing movement of said plate, a pull chain connected to said plate at the side thereof opposite the spring connected side and for moving said plate into opening position, said chain extending down said chimney, a depending U-shaped guide on said shell adjacent one side thereof for guiding the chain to hang therefrom at one side of the chimney, and an abutment stop above said shaft for limiting opening movement of said plate.

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