Aug. 30, 1966 C. W. ADELT 3,269,384

FIREPLACE DAMPER ASSEMBLY

Filed Feb. 19, 1965 2 Sheets-Sheet 1

FIG. 1.

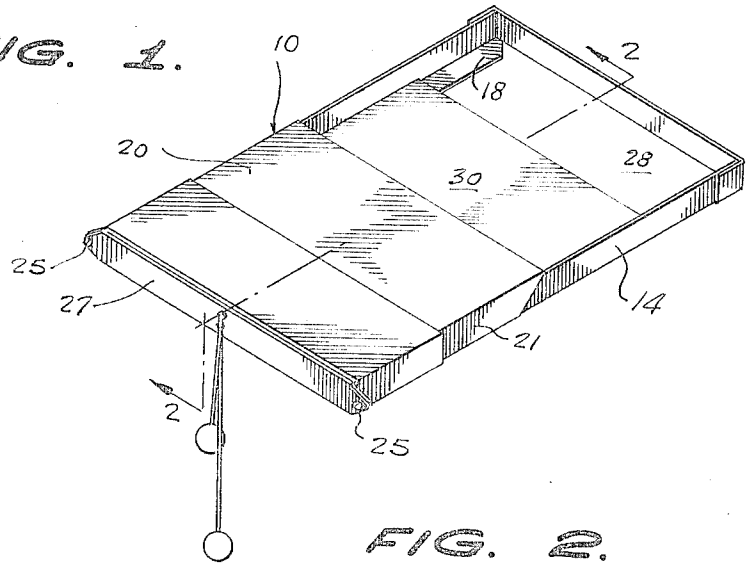


FIG. 2.

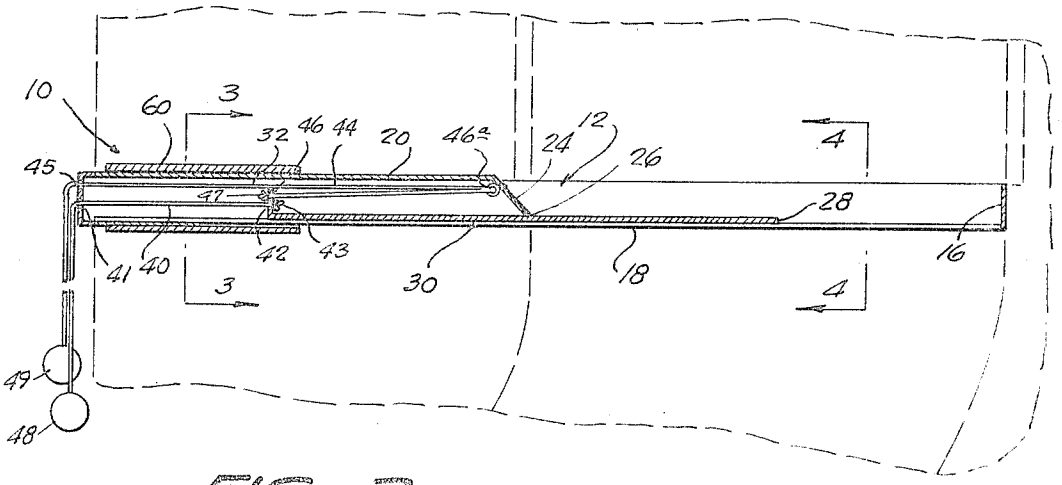


FIG. 3.

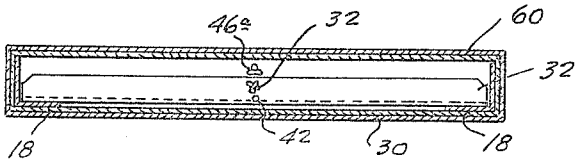
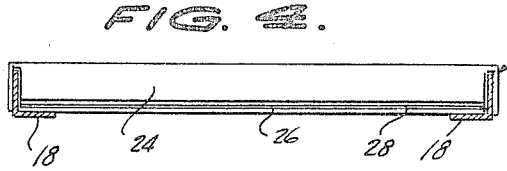


FIG. 4.



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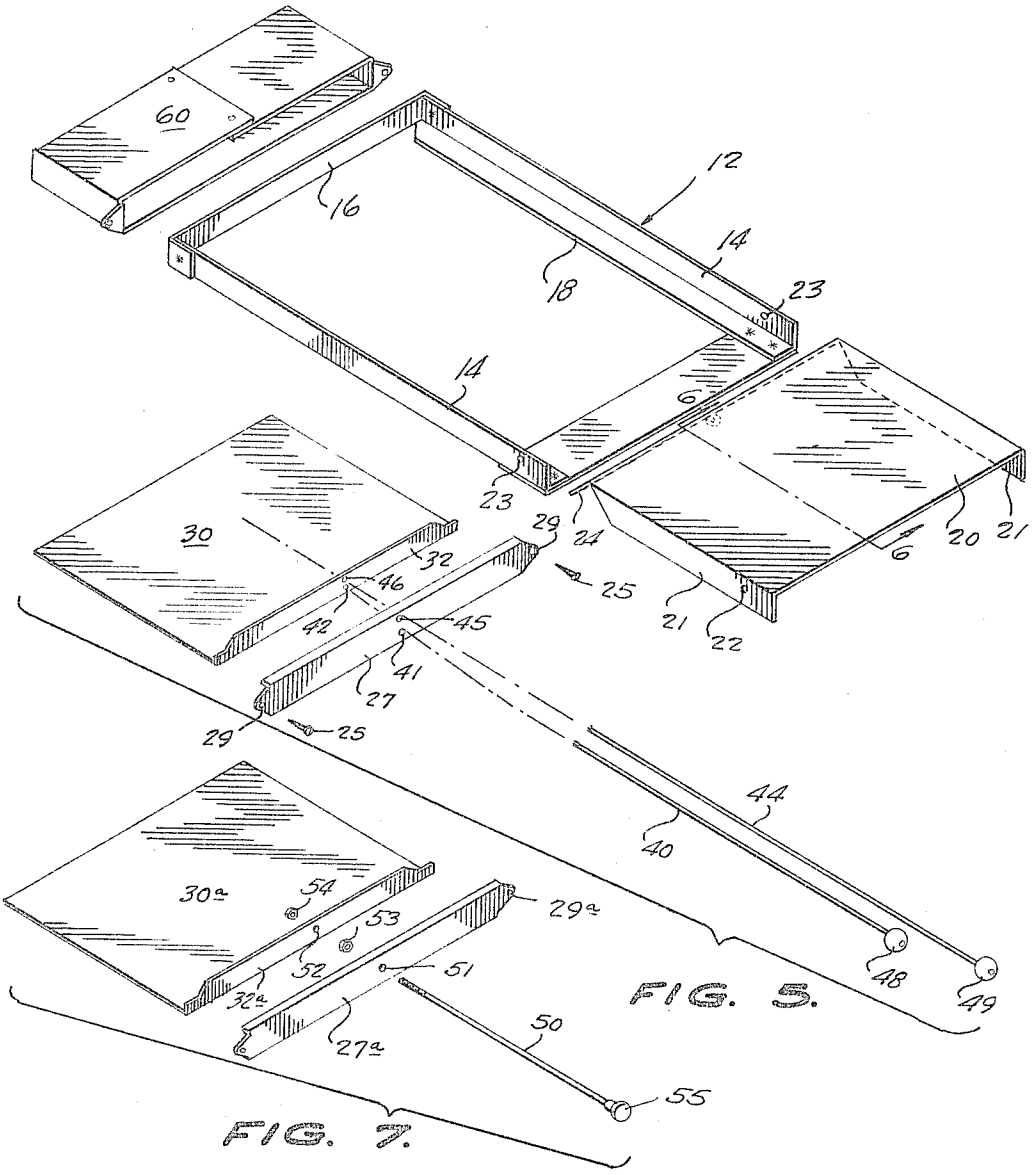


FIG. 5.

FIG. 7.

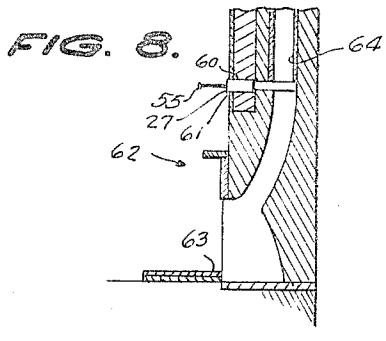


FIG. 8.

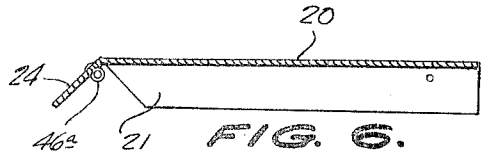


FIG. 6.

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FIREPLACE DAMPER ASSEMBLY

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4 Claims. (Cl. 126—288)

This invention relates to a fireplace damper assembly.

An object of the present invention is to provide a fireplace damper assembly which is easily insertable in place in the fireplace and which may be easily withdrawn for purposes of replacement or repair.

Another object of the present invention is to provide a fireplace damper assembly which is self-cleaning, and which provides a positive damper control.

A further object of the invention is to provide a fireplace damper assembly which shows negligible wear and tear during long indefinite periods of use because it never comes into direct contact with fumes, soot, or extreme heat.

A still further object of the present invention is to provide a fireplace damper assembly which is extremely simple in structure, and highly efficient in action.

Other objects and advantages of the present invention wil become apparent from the following description when taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a perspective view of the fireplace damper unit according to the present invention with the valve in partially open position.

FIGURE 2 is an enlarged longitudinal sectional view taken on the line 2—2 of FIGURE 1.

FIGURE 3 is a transverse sectional view taken on the line 3—3 of FIGURE 2.

FIGURE 4 is a transverse sectional view taken on the line 4—4 of FIGURE 2.

FIGURE 5 is an enlarged exploded perspective view of the fireplace damper unit of FIGURE 1.

FIGURE 6 is a transverse sectional view taken on the line 6—6 of FIGURE 5.

FIGURE 7 is an exploded perspective view of the valve and the actuating means therefor of the fireplace damper unit of the present invention, the actuating means taking a different form from that illustrated in FIGURE 5.

FIGURE 8 is a fragmentary sectional view of a fireplace showing the complete damper assembly according to the present invention mounted therein.

Referring to FIGURES 1 to 7 of the drawings, the numeral **10** designates generally the fireplace damper unit according to the present invention, the unit comprising an elongated open frame **12** which has upstanding side members **14**, and an upstanding end member **16** extending between and secured to the complemental rear ends of the side members **14**. A ledge **18** is disposed inwardly of and extends along each of the side members **14**, the ledges facing each other.

An apron **20** bridges the ledges **18** and extends from the complemental front ends of the side members **14** and terminates at a point spaced from the end member **16**, the apron being secured to the side members **14**. The apron **20** is of an inverted U-shaped configuration in cross-section and its sides **21** engage adjacent portions of the ledges **18** and are detachably secured to the side members **14** as by bolts, not shown, passing through complemental bolt holes **22** and **23** provided in the sides **21** and side members **14** respectively, as shown in FIGURE 5. If desired, the sides **21** can be attached to the side members **14** as by welding. A downwardly and outwardly-sloping lip **24** extends along and depends from the terminating point of the apron **20**, the lower end of the lip being contiguous to and spaced from the ledges **18** and forming with the ledges a slot **26**. A cross-piece **27** extends over and closes the end of the apron **20** opposite the lip **24** and is detachably

secured, FIGURE 5, as by fastening elements **25** supported in apertures **29** provided in the cross-piece **27**.

It is to be noted that the part of the frame **12** defined by the lip **24**, the end member **16**, and the adjacent portions of the ledges **18** form an opening **28** conforming to that of a flue in a fireplace.

A flat plate valve **30** is mounted in the frame **12** for sliding movement along the ledges **18** between a position wholly concealed below the apron **20** and inwardly of the slot **26** and out of closing relation with respect to the opening **28** and a position projected out of the slot **26** and beyond the apron **20** and into closing relation with respect to the opening **28**. Means is operatively connected to the plate valve **30** for moving the plate valve between the aforementioned positions. Specifically, this means embodies a backing **32** rising from the end of the plate valve **30** inwardly of the slot **26** and an actuating means which is operatively connected to the backing **32**. The actuating means, FIGURE 5, comprises a lower pull cord **40** which extends through a lower hole **41** provided in the cross-piece **27** and through a lower hole **42** provided in the backing **32** with the end knotted as at **43**, and bearing against the inner face of the backing **32**. The actuating means also includes an upper pull cord **44** which extends through an upper hole **45** provided in the cross-piece **27** and through an eye **46***a* and backward to and through an upper hole **46** provided in the backing **32** with the end knotted as at **47** and bearing against the outer face of the backing **32**. Application of a pulling force applied to the ball **48** on the other end of the cord **40**, results in movement of the plate valve **30** to the open position, and application of a pulling force applied to the ball **49** on the other end of the cord **44** results in movement of the plate valve **30** to the closed position.

The actuating means may take the construction as depicted in FIGURE 7. In this construction, a rigid elongated rod **50** extends through a hole **51** provided in the cross-piece **27***a* and through a hole **52** provided in the backing **32***a*, with a nut **53** in threaded engagement with the portion adjacent one end and bearing against the inner face of the cross-piece **27***a* and a nut **54** in threaded engagement with the said one end portion and bearing against the inner face of the backing **32***a* of the plate valve **30***a*. Application of a pulling force applied to the handle **55** on the other end of the rod **50**, results in movement of the plate valve **30***a* to open position, and application of a pushing force applied to the handle **55**, results in movement of the plate valve **30***a* to the closed position.

The fireplace damper assembly according to the present invention comprises the above-described fireplace damper unit **10** and a sleeve **60**, FIGURES 1 and 5. The sleeve **60** is of a configuration and size to embracingly receive for insertion therethrough and for withdrawal therefrom the fireplace damper unit **10**, and is mountable in the front wall of a fireplace so that it opens out of the aforesaid wall.

In use, the sleeve **60**, FIGURE 8, is disposed horizontally and fixedly mounted in and opens out of a front wall **61** of a fireplace **62**, the fireplace having a hearth **63** from which the front wall **61** rises, and a flue **64** is behind the front wall **61** and is in communication with the hearth **63** and a chimney, not shown. The sleeve **60** is of a configuration and size to freely receive for insertion therethrough and for withdrawal therefrom the fireplace damper unit **10**. The fireplace damper unit **10** is inserted into the sleeve **60** and is positioned in the fireplace **62** as as to extend transversely across the flue **64** with the end member **16** abutting against the wall of the flue. With the damper unit **10** thus positioned, the cross-piece **27** is substantially flush with the front face of the front wall **61** of the fireplace **62**, and the cords **40** and **44** or rod **50** are exteriorly of the cross-piece **27**.

A glance of a viewer at the front of the cross-piece **27** indicates from the position of the cords **40** and **44** or rod **50** whether the plate valve **30** or **30***a* is in open, partially open, or closed position. Movement of the plate valve **30** or **30***a* into the slot **26**, causes the lip **24** to loosen any debris which may have been deposited from the flue **64** upon the plate valve **30** or **30***a*, and be discharged onto the hearth. When desired, the damper unit **10** may be withdrawn from the fireplace through the sleeve **60**.

If the front wall **61** of the fireplace **62** is not deep enough to accommodate the fireplace damper unit **10**, the sleeve **60** is slanted so as to extend upwardly or downwardly through the front wall **61** and flue **64**, thereby accommodating the damper unit **10** to the fireplace **62**.

Where the fireplace damper unit **10** carrying the pull cords **40** and **44** is employed and there is a picture hanging from the front wall **61** of the fireplace **62** which covers the sleeve **60**, there is provided two flexible tubes which are attached at the upper ends over the openings **41** and **45** in the cross-piece **27** and depend below the bottom of the picture, such tubes housing the cords **40** and **44**.

The thus described fireplace damper assembly possesses the advantages in that it may be easily insertable in place in the fireplace, and easily withdrawn for purposes of replacement or repair; it is self-cleaning; it provides a positive damper control; and it, when in use, never comes into direct contact with fumes, soot, or extreme heat, and hence, shows little wear and tear after long periods of use. In addition, it may be made adjustable in both width and depth and hence, requires a lesser inventory; and it may be constructed of lighter metals, such as stainless steel.

What is claimed is:

1. In a fireplace damper assembly, a fireplace damper unit comprising an elongated open frame having upstanding side members and an upstanding end member extending between and secured to the complemental rear ends of said side members, a ledge inwardly of and extending along each of said side members, said ledges extending toward each other, an apron bridging the ledges and extending from the complemental front ends of said side members and terminating at a point spaced from said end member and secured to said side members, a downwardly and outwardly-sloping lip extending along and depending from the terminating end of said apron, the lower end of said lip being contiguous to and spaced from said ledges and forming with said ledges a slot, the part of said frame defined by said lip, said end member and the adjacent portions of said ledges forming an opening adapted to conform to that of a flue in a fireplace, a flat plate valve mounted in said frame for sliding movement along said ledges between a position wholly concealed below said apron and inwardly of said slot and out of closing relation with respect to said opening, and a position projected out of said slot and beyond said apron and in closing relation with respective to said opening, and means operatively connected to said valve for moving said valve between the aforesaid positions.

2. The fireplace damper assembly according to claim **1** wherein said apron is of an inverted U-shaped configuration in cross-section with the sides engaging the adjacent portions of the ledges.

3. The fireplace assembly according to claim **1** wherein said means embodies a backing rising from the end of said valve inwardly of said slot and actuating means operatively connected to said backing for effecting the movement of said valve between the respective positions.

4. The combination with a fireplace having a hearth, a front wall rising from said hearth, and a flue behind said front wall, of a fireplace damper assembly comprising a horizontally-disposed sleeve fixedly-mounted in and removable from said front wall, and a fireplace damper unit insertable through said sleeve to a position extending transversely across said flue and withdrawable out of said sleeve from the aforesaid position, said damper unit comprising an elongated open frame having upstanding side members and an upstanding end member extending between and secured to the complemental rear ends of said side members, a ledge inwardly of and extending along each of said side members, said ledges facing each other, an apron bridging the ledges and extending from the complemental front ends of said side members and terminating at a point spaced from said end member and secured to said side members, a downwardly and outwardly-sloping lip extending along and depending from the terminating end of said apron, the lower end of said lip being contiguous to and spaced from said ledges and forming with said ledges a slot, the part of said frame defined by said lip, said end member, and the adjacent portions of said ledges forming an opening conforming to that of said flue, a flat plate valve mounted in said frame for sliding movement along said ledges between a position wholly concealed below said apron and inwardly of said slot and out of closing relation with respect to said opening and a position projected out of said slot and beyond said apron and into closing relation with respect to said opening, and means operatively connected to said valve for moving said valve between the aforesaid positions.

References Cited by the Examiner

UNITED STATES PATENTS

926,266	6/1909	Livesey	126—288
1,213,173	1/1917	Evans	126—288 X
2,196,934	4/1940	Morgan	126—288 X

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