Dec. 25, 1956 S. BUCCI 2,775,239

SMOKE CONTROL FOR FIREPLACES

Filed July 14, 1952

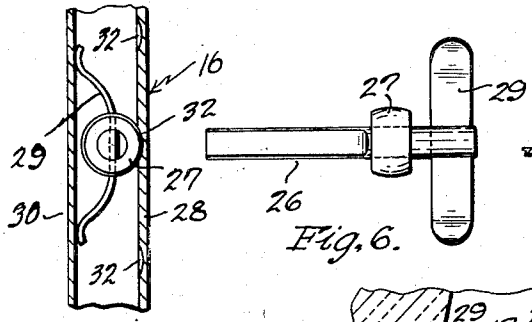


Fig. 6.

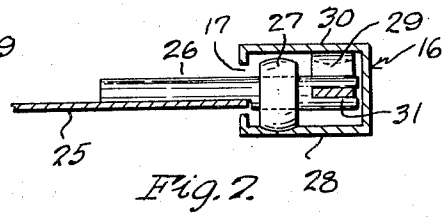


Fig. 7.

Fig. 5.

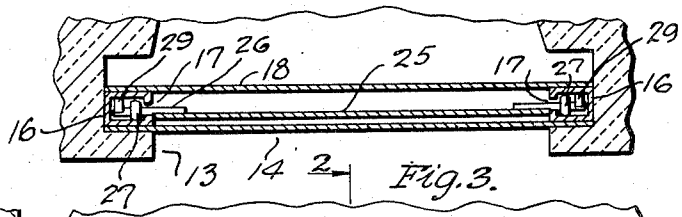


Fig. 3.

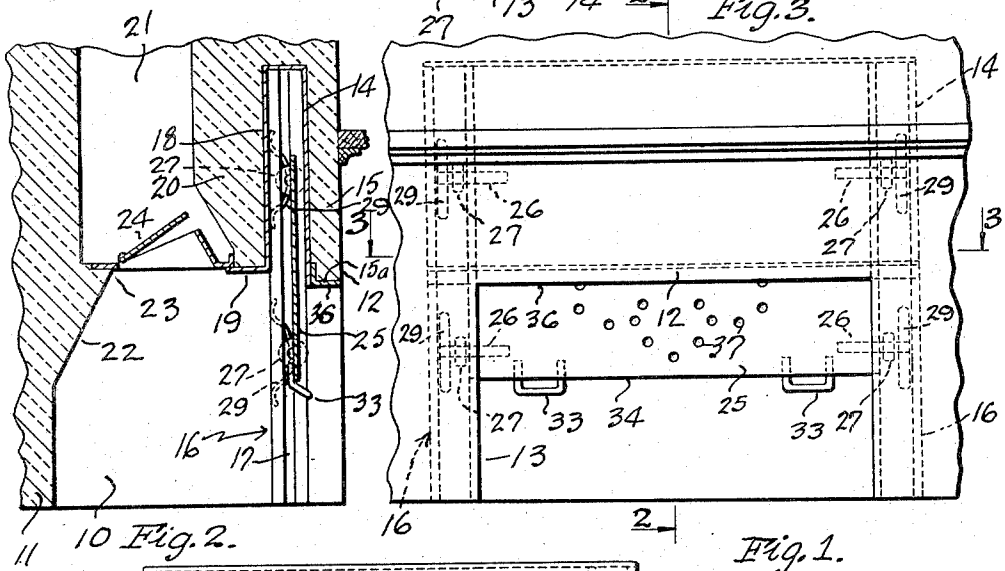


Fig. 2.

Fig. 1.

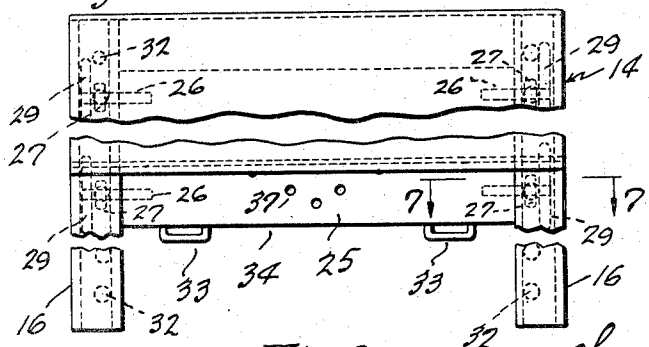


Fig. 4.

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SMOKE CONTROL FOR FIREPLACES

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1 Claim. (Cl. 126—135)

This invention relates to a smoke-control device for the opening in a fireplace, and has for an object to provide such a device including a closure which may be drawn down to close off the opening to substantially seal the fireplace at night or any other time to prevent fires, and which can be raised and left at various heights to close off any desired portion of the opening for controlling the draft and preventing smoke flowing out into the room.

A further object is to provide such a device which may be easily installed and easily operated to effect the smoke and draft control.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawing forming a part of this specification. It is, however, to be understood the invention is not limited to the specific details of construction and arrangement shown, but may embody various changes and modifications within the scope of the invention.

In this drawing:

Fig. 1 is a front elevation of a fireplace with this device installed;

Fig. 2 is a vertical section substantially on line 2—2 of Fig. 1;

Fig. 3 is a horizontal section substantially on line 3—3 of Fig. 1;

Fig. 4 is a front view of the smoke-control device by itself, removed from the fireplace;

Fig. 5 is a detail section showing means for retaining the control element in different positions;

Fig. 6 is a detail of a portion of this means, and

Fig. 7 is a detail section of this means substantially on line 7—7 of Fig. 4.

The fireplace comprises the usual space **10** for the andirons or grate (not shown) and may be lined by the usual firebrick with the surrounding masonry **11**. This smoke-control device is mounted at the back of the facing **12** at the sides and front of the fireplace opening **13**, and comprises a sheetmetal boxlike structure **14** mounted just above the opening **13** and back of the facing **12**, preferably by one row of bricks and the usual wall finish **15**, supported by a cross beam or angle member **15***a*, as shown in Fig. 2. Extending downwardly from the lower edge of this upper structure **14** and located in the wall at the opposite sides of the opening **13** are upright guide structures **16**. This may be any structure desired, but is preferably a sheet and boxlike structure provided in the side facing the opening with a vertical slot **17**, so that these slots face each other from the opposite sides of the opening **13**. At the lower edge of the back wall **18** of the boxlike structure **14** is a rearwardly extending shelf **19** on which the front brick **20** of the flue **21** may be supported.

The back wall of the fireplace may have the usual upwardly and forwardly inclined heat deflector wall **22** leading to the flue opening **23** in which is mounted the usual damper **24**, which may be shifted and controlled by any of the usual mechanisms (not shown).

The guides **16** extend to the bottom of the opening **13**

and form guides at the opposite edges of the smoke-control member **25**. This may be of different constructions but is preferably an upright sheet metal member guided at its opposite edges by the guide structures **16**, and mounted adjacent the opposite edges of this member are bolts **26** extending through the slots **17** into the guide structures and carrying rollers **27** running on one wall of the guides **16**, in the present arrangement the front wall **28**, and they also carry a flat bowed spring **29** frictionally engaging and slidable on the opposite side wall **30**. The spring may be mounted in any suitable way, but preferably is held by a tight fit in a slot **31** in the end of the bolt. Any suitable number of these springs and rollers may be used, but preferably there are two on each of the opposite upright edges of the smoke-control member **25** and located adjacent the top and bottom edges. The rollers **27** facilitate shifting the control member up and down in the guides to any desired position, and the friction springs **29** hold it in any position to which it may be shifted. It is also preferred to provide the side wall **28** on which the rollers **27** run with a series of openings or depressions **32** in which the rollers may seat and be retained by pressure of the springs **29** to more effectively hold the member **25** at different heights and prevent its gradually dropping down from any given adjusted position due to vibration or other causes.

The control member **25** is provided with one or more handles **33** to facilitate shifting it to different positions. These are preferably located adjacent the lower edge **34** of the smoke-control member **25**, and may be located either above this lower edge or to project a short distance below it, as shown. If they project a short distance below this lower edge, the control member **25** may be raised to a position entirely above the top edge **35** of the fireplace opening **13** so that it is entirely out of sight with these handles **33** projecting slightly below this edge where they are accessible for drawing the control member **25** downwardly over the opening. When the control member is in the lower position, such handles projecting below its lower edge would prevent this lower edge engaging the lower wall or floor of the fireplace, and therefore, although it would substantially seal off the opening it would leave a small opening for entrance of sufficient air to maintain the fire and prevent it from being smothered; or if it is desired to provide a structure which would entirely seal off the opening these handles could be placed a short distance above the lower edge **34** of the member **25**, or depressions could be provided in the lower surface of the fireplace to receive these handles.

This device may be used to prevent smoke getting into the room by drawing it to any desired height below the top edge **36** of the fireplace opening **13**. It will also control the draft to the fire, and it can be, as described above, used to substantially seal off the opening **13** to prevent sparks being thrown out and causing fires at night or any other time when it is drawn clear down to the hearth so as to close the whole opening. If desired, this member **25** may also be provided with a series of small openings **37** to permit entrance of air to help maintain the draft and prevent smoke, and also to provide sufficient air when the control member **25** is in its lowest position to maintain the fire and prevent its being smothered. Also when the member **25** is in the partially lowered position, as shown in Fig. 1, for example, these openings will permit light from the fire to pass through and give a pleasing effect.

It will be seen the device is a very simple one and may be readily installed in the usual fireplace construction and that when installed the fireplace may be used in the usual manner with the control member entirely retracted and out of sight; or it can be readily drawn to any desired position to prevent smoke passing out into the room,

particularly when a fire is first started and the bricks and flue are cold so the draft is not sufficient to carry the smoke up the flue, or it may be used by drawing to a lower position to control the draft, as for example by confining the entrance of air to the lower part of the fire in starting it or to get a sort of forcing effect to get the fire going quickly.

Having thus set forth the nature of my invention, I claim:

A fireplace comprising walls forming a combustion space, a chimney flue leading from the upper part of said space and a front opening leading to said space with a wall over said opening and extending upwardly therefrom, a control device comprising a frame structure including a housing comprising spaced connected upright front and rear walls located in the wall over the fireplace opening immediately above this opening and open at the bottom so as to be open over said opening, guide members forming a part of and extending downwardly from said housing located at the opposite upright edges of the fireplace opening and including connected spaced front and rear walls, a control member comprising an upright sheet metal closure projecting at its upper edge into the housing and at its opposite upright side edges into said guide members between the walls thereof, mounting means for the closure mounted thereon and guided in said guide members to permit up and down movement of the closure, means on the mounting means to retain the closure in different adjusted positions, handle means on the closure for shifting the closure, and the closure being provided with a series of air inlet openings.

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