Jan. 30, 1962 G. E. RUBENS 3,018,774

ADJUSTABLE MOUNTING APPARATUS

Filed Sept. 26, 1957 2 Sheets-Sheet 1

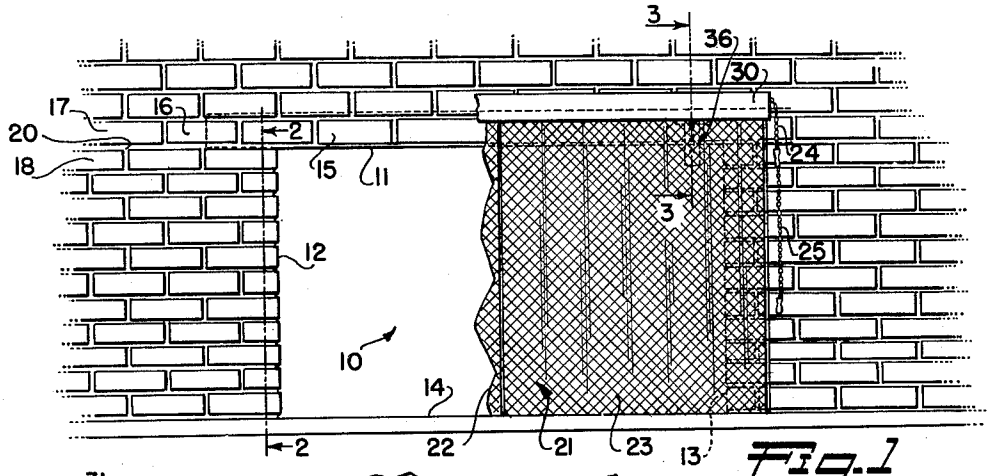


Fig. 1

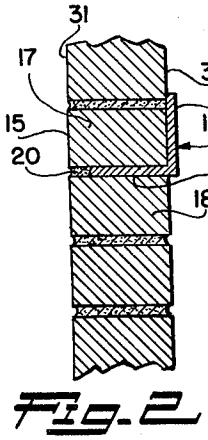


Fig. 2

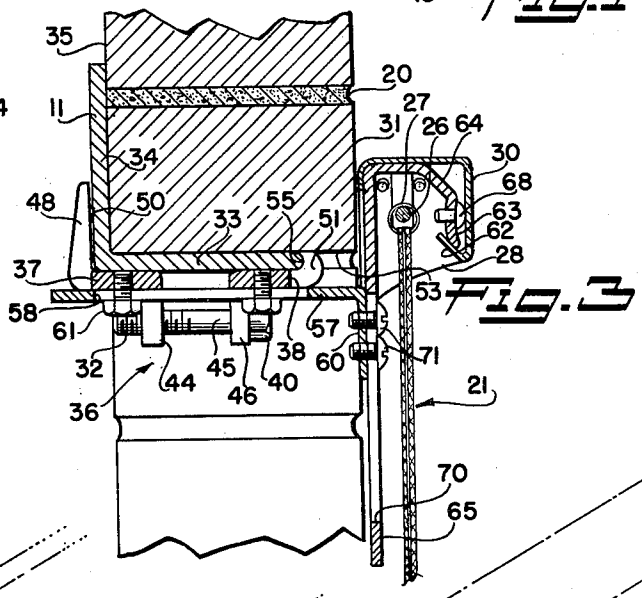


Fig. 3

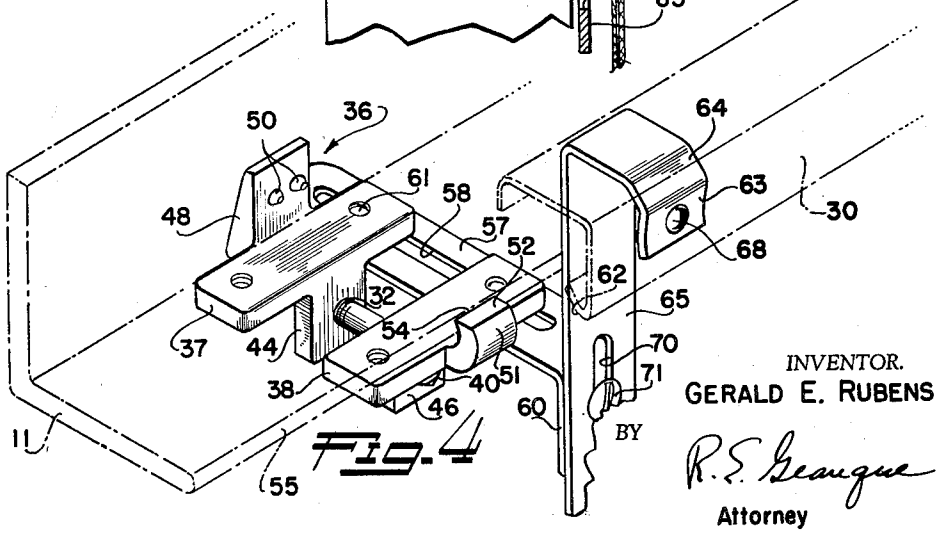


Fig. 4

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Jan. 30, 1962 G. E. RUBENS 3,018,774

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Filed Sept. 26, 1957 2 Sheets-Sheet 2

Fig. 5

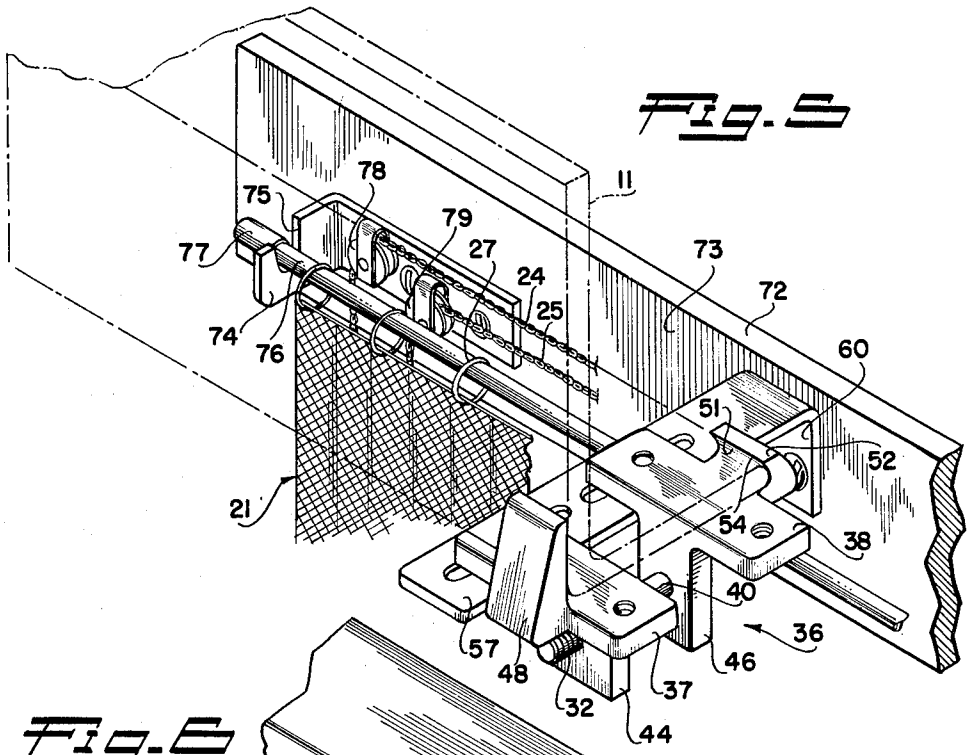
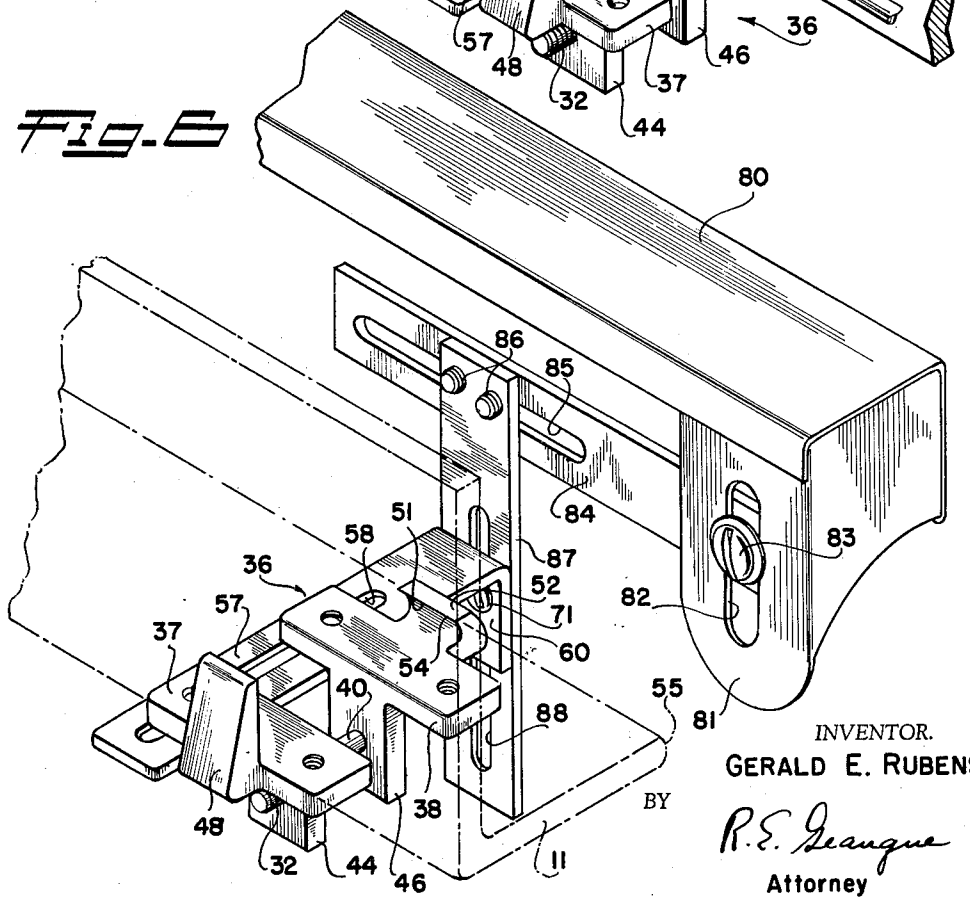


Fig. 6



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ADJUSTABLE MOUNTING APPARATUS

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This invention relates to mounting apparatus and more particularly to a novel adjustable mounting means for installing a firescreen, or the like, in a fireplace which is readily adapted to accommodate to a variety of firescreen embodiments.

In the building industry, as well as others, it has been the conventional practice to install such equipment as firescreens, for example, in a fireplace by means of screws or other fasteners which project through a decorative member on which the screen is carried into holding contact with the construction of the fireplace. Generally, the screen is divided at its center to provide a pair of screen halves and mechanical means are employed for conveniently drawing the screen halves to an open position by moving the adjacent ends of the pair of screen halves in opposite directions. To close the screen, the mechanical means are actuated to draw the ends of the screen together.

Difficulties are encountered when employing the conventional practice for installing a firescreen on a fireplace which stem largely from the fact that holes, or other alterations, are required to be made in the fireplace construction. Usually, a fireplace is constructed of expensive building materials, such as flagstone or bricks of high ornamental value and the alteration or modification of these materials sometimes causes undesirable chipping or cracks and in some instances loosens the bricks so that inadequate support is given to the mounting of the firescreen. This inadequacy causes the firescreen to sag and to detract from the general decorative appearance of the fireplace. Furthermore, modern design in present day building construction offers a variety of fireplace designs having varying configurations, lengths and heights from the floor so that it is difficult to provide a standard mounting means for a firescreen which is universally suited to fit many fireplace configurations.

These difficulties are overcome in accordance with the present invention which provides an adjustable mounting means comprising a base plate or lintel integrally built into the fireplace construction on which clamping means are detachably secured. The clamping means carry an adjustable extension which projects in front of the face of the fireplace and which, in turn, is adjustably secured to a support member carrying the screen and mechanical actuating means therefor. By securing the clamping means to the base plate, the firescreen is supported without altering or marring the building materials employed in the construction of the fireplace while adjusting the extension means associated with the clamping means permits the member to be properly spaced with respect to the face of the fireplace. Adjustment of the bracing means properly spaces the firescreen with respect to the floor or fireplace step. Furthermore, a feature resides in the fact that the clamping means, including the extension means and the bracing means, may be suitably spaced along the decorative member to properly mount firescreens in any one of a variety of fireplace configurations having different lengths and heights from the floor.

Therefore, it is an object of the present invention to provide a novel mounting means for a firescreen which is readily adjustable to properly mount the firescreen with respect to fireplaces of varying configurations.

It is another object of the present invention to provide a firescreen mounting means which may be readily attached to the fireplace or detached therefrom without altering or modifying the fireplace construction.

Still a further object of the present invention is to provide a novel mounting means for a firescreen which will readily accommodate a variety of firescreen embodiments.

Still another object of the invention is to provide a mounting means for a firescreen which may be attached to or detached from a fireplace by an unskilled person in the mechanical arts.

Still a further object of the present invention is to provide a novel mounting means for a firescreen which does not detract from the desired ornamental appearance of the firescreen and wherein the mounting means and screen actuating means is hidden from sight by means of the firescreen itself.

These and other objects will be more readily apparent upon the reading of the following specification when taken in connection with the accompanying drawings wherein:

FIGURE 1 is a front elevational view of a fireplace construction having a firescreen mounted thereon in accordance with the present invention;

FIGURE 2 is a sectional view of a fireplace showing an angle base plate fixed thereto taken in the direction of arrows 2—2 of FIGURE 1;

FIGURE 3 is an enlarged sectional view of the mounting means for supporting one embodiment of a firescreen taken in the direction of arrows 3—3 of FIGURE 1;

FIGURE 4 is a perspective view of a firescreen mounting means shown in FIGURE 3;

FIGURE 5 is a perspective view of the mounting means of FIGURE 4 employed for supporting another embodiment of a firescreen; and

FIGURE 6 is a perspective view of the mounting means of FIGURE 4 employed for supporting still another embodiment of a firescreen.

With reference to FIGURE 1, a fireplace construction is shown having an opening **10** defined by a horizontal lintel **11** spanning opening **10**, a pair of substantially parallel sides **12** and **13** and a hearth **14** which may take the form of a floor or fireplace step. The fireplace construction is formed by conventional brick masonry wherein a plurality of bricks, such as bricks **15** and **16**, are laid in an end-to-end relationship to form a single row of bricks, such as rows **17** and **18**. A plurality of rows of bricks are provided to give the fireplace construction the desired height compatible with a particular fireplace design. The bricks of adjacent rows and the bricks included in each row are fixed to one another by a suitable mortar mixture **20**, which when dry, retains the plurality of bricks in place. The lintel suitably supports row **17** of bricks to provide a top for opening **10**.

The opening **10** is suitable for receiving combustible materials such as wood logs (not shown) and is usually covered by a screen **21** of interwoven fine mesh wire which interferes with the travel of sparks or other particles which may be sputtered or thrown from the combustible material towards the opening. In this manner, the sparks or particles are confined by the sides of the fireplace construction and the firescreen so that the sparks' only unimpeded path of travel would be through the chimney (not shown) which extends upwards from the hearth behind the bricks supported on the lintel.

In the present instance, screen **21** is shown divided substantially at its center to provide a pair of screen halves **22** and **23** so that when drawn together, the halves combine to close the opening **10** and when the adjacent ends of the halves are drawn towards sides **12** and **13** respectively, the halves expose opening **10** so that ingress and egress into and out of the opening may be had. The

screen halves may be actuated by any suitable means; however, as shown, a pair of chains **24** and **25** are employed for this purpose. Manual pulling of chain **24** urges the screen halves to close while the pulling of chain **25** urges the screen halves to open. It is to be noted that the screen actuating means or the particular screen configuration per se does not form a part of the present invention and is illustrated and described only in the interest of clarity and by way of example.

As shown more clearly in FIGURE 3, the screen is movably suepended from a rod **26** by means of a plurality of rings, such as a ring **27**, which fits between the interweaving of the wire mesh and encircles the rod. Rod **26** is supported on its opposite ends by end pieces, such as piece **28**, carried by a member **30** generally mounted forward of the front face **31** of the fireplace construction. This latter member is employed to house the rod, rings and chains so that the presence of these parts will be hidden from view from the room interior and the general appearance of the firescreen improved. Also, member **30** serves as an adequate structure on which to attach a means for mounting the screen on the fireplace with respect to the face **31** of the fireplace construction and the hearth or fireplace step.

The means for mounting the firescreen and decorative member **30** to the fireplace, include the lintel **11** having a horizontal member **33** and a vertical member **34** integrally formed at a right angle to member **33**. As shown more clearly in FIGURE 2, lintel **11** is secured to the fireplace construction by interposing member **33** between adjacent rows of brick **17** and **18** respectively, which are suitably held in place by the mortar mixture **20**. Member **34** of the lintel is arranged to follow the internal contour of the fireplace extending upward from the hearth toward the chimney and is engageable with the inner face **35** of the fireplace construction. Lintel **11** extends from one end of opening **10** to its opposite end and projects beyond the sides **12** and **13** defining the opening for a distance of about the length of one brick. Construction in this manner firmly secures lintel **11** in position so that adequate support is provided to the immediate row **17** of bricks.

In order to mount member **30** to the front face **31** of the fireplace, a clamping means indicated by the general reference numeral **36** in FIG. 3 is provided which comprises a pair of cooperating jaw members **37** and **38** which are movably connected together by means of a threaded bolt **40** so that the jaws may be moved relative to one another. Bolt **40** is provided with a plurality of screw threads **32** which engage with a threaded bore (not shown) provided in leg **44** of jaw **37** while the shank **45** of the bolt passes through a smooth bore (not shown) provided in a leg **46** of jaw **38**. Jaw **37** is provided with an upright portion **48** carrying raised portions **50** which engage the rear surface of member **34** of lintel **11**. Jaw **38** is provided with a hook-like projection **51** which is provided with a flat portion **52** and is fabricated in such a fashion that the general curvature of the projection **51** mates with the lower surface **53** of a brick in row **17**. The extreme tip of projection **51** indicated by reference numeral **54** is arranged to grip an end **55** of member **33** of lintel **11** so that in combination with jaw **37**, bolt **40** may be rotated to draw the jaws together into firm engagement with member **34** and end **55** of member **33**. An extension **57** is provided which is carried by the jaws having an elongated slot **58** and an arm **60**. To secure the extension to the jaws, a pair of fasteners, such as screw **61**, is employed which project through the slot and threadably engage the jaws. The opposite ends of the slot **58** limit the distance which the arm **60** may be projected beyond face **31** of the fireplace construction when the jaws are clamped to lintel **11**.

Although a single mounting means **36** is being described, it is to be noted that a similarly constructed mounted means is provided on the opposite end of member **30** in space relationship to the mounting means **36** as shown in FIGURE 1.

In FIGURES 3 and 4, one firescreen embodiment is shown having a member **30** for housing the rod **26** and the rings **27** for suspending the screen **21**. Member **30** is provided with an inward projecting flange **62** which is adapted to receive a contoured end **63** provided on a leg **64** formed in a brace **65**. End **63** is suitably provided with a rubber grommet **68** having a round head which engages the inner surface of member **30** and applies a retaining tension between the inner surface of member **30** and the projecting flange **62**.

Each brace **65** is provided with an elongated slot **70** through which a pair of fasteners, such as screw **71**, projects. Inasmuch as the head of each screw is of larger diameter than the width of the slot, only the shank of the screw will pass through the slot of brace **60**. Fasteners **71** are received in threaded bores provided in the arm **60** provided on the extension **57**. Therefore, the member **30** may be adjustably positioned in a vertical direction by loosening the fasteners **71** and allowing the shank of each fastener to slide within slot **70** provided in brace **65**. The opposing ends of the slot **70**, will determine the extreme limits of vertical adjustment for the member **30**. Inasmuch as brace **65** is mounted on leg **60** of extension **57** it can be seen that member **30** may be easily adjusted to any desired distance with respect to the fireplace face **31** to compensate for the thickness of the fireplace wall. Generally, extension **57** will be adjusted so that the rear of member **30** will be substantially flush with the front face **31** of the fireplace construction.

With reference to FIGURE 5, another embodiment of a firescreen is shown wherein the member **30** as shown in FIGURES 3 and 4 has been replaced with a broad flat member **72** having a rear side **73** on which a bracket **74** is suitably mounted. Bracket **74** is provided with an open ended slot **75** which receives the end of a rod **76** on which screen **21** is suspended by means of springs **27**. Each end of rod **70** is provided with a stop **77** which is of larger diameter than slot **75** so that any longitudinal movement of the rod which would cause its displacement from bracket **74** is prevented.

Bracket **72** also serves to mount a pair of pulleys **78** and **79** which carry screen **21** actuating chains **24** and **25**. The ends of chains **24** and **25** in this embodiment are coupled to rings **27** in a manner similar to the embodiment shown in FIGS. 3 and 4 so that the screen **21** may be suitably opened and closed. By employing member **72**, it is possible to eliminate the brace **65** and thereby effect a direct attachment of arm **60** to the rear surface **73** of member **72**. Therefore, similar clamping means **36** as employed in the embodiment of FIGURES 3 and 4 may be employed including extension **57** for positioning the rear surface **73** of member **72** respective to the front face **31** of the fireplace construction.

With reference to FIGURE 6, similar clamping means **36** is shown as employed with respect to the above embodiments of a firescreen for mounting still another embodiment of a firescreen wherein a member **80** is employed for carrying the firescreen and its associated rod and actuating mechanism (not shown) in a manner which is similar to the embodiment shown in FIGURES 3 and 4. However, the opposite ends of member **80** are provided with a tab **81** which is suitably provided with an elongated slot **82** through which a fastener **83** projects and terminates in engagement with a bracket **84**. The bracket **84** extends substantially parallel to member **80** and projects inwardly from tab **81**. Each bracket **84** is provided with an elongated slot **85** through which a pair of fasteners **86** projects terminating in threadable engagement with a plate **87**. Plate **87** is provided with an elongated slot **88** similar to slot **85** which receives a fastener **71** carried by arm **60** of extension **57**. Therefore, member **80** may be adjusted in a vertical plane by

loosening fasteners 71 and causing plate 87 to slide either upward or downward to the desired position followed by tightening fasteners 71. The rear flange of member 80 may be positioned with respect to front face 31 of the fireplace construction suitably adjusting extension 57 by means of fasteners 61. In the present instance a pair of fasteners 86 are provided so that a parallel alignment can be arranged between brackets 84 and the lintel 11.

Actual operation will be described with reference to the frescreen embodiment shown in FIGURES 3 and 4, wherein lintel 11 is included in the construction of a fireplace so that member 33 of the lintel supports the row of bricks defining the top of opening 10. Lintel 11 is also arranged so that member 34 is installed adjacent the rear face 35 of the fireplace wall. Bolt 40, coupling jaws 37 and 38 together may be rotated so that the distance between upright portion 48 and curved projection 51 is increased to accommodate the width of member 33 of the lintel. The clamp is held so that surface 52 of projection 51 engages the lower surface of row 17 of bricks and end 55 of member 33 and so that upright portion 48 urges its associated raised portion 50 into firm engagement with the back surface of member 34 of the lintel. At this time, bolt 40 may be rotated in a manner to draw the opposing jaws together and thereby clamp onto lintel 11.

Member 30 may be arranged so that its rearward face is substantially flush with the front face 31 of the fireplace construction. During the positioning of member 30, extension 57 slides on fasteners 61 which are projected through slot 58. Upon proper position of member 30 with respect to front face 31 of the fireplace construction, fasteners 61 may be actuated to fix the position of extension 57 with respect to the clamping jaws.

Now it is in order to adjust the vertical position of member 30 and thereby the elevation of screen 21 by loosening fasteners 71 and sliding bracket 65 by means of its slot 70 to the desired height of member 30. At this time, the fasteners 71 may be tightened so that bracket 53 is firmly attached to arm 60 of extension 57. Inasmuch as member 30 is composed of resilient metal, the head rivet 68 will place a spring retaining tension on member 30 via flange 62 and the back of member 30.

Therefore, the present invention provides a simple and easy mounting means for securing a firescreen to the lintel of a fireplace which employs a clamping means and adjustable means for properly fitting the firescreen over the opening of the fireplace taking into consideration the height of the screen from the hearth and the distance with respect to the face of the fireplace. All adjustments are easily acomplished by persons unskilled in the mechanical arts and without the necessity of special tools or altering the fireplace construction.

Various other modifications are contemplated by those skilled in the art without departing from the spirit and scope of the invention, as hereinafter defined by the appended claims.

What is claimed is:

1. In a fireplace construction having an opening, a lintel spanning said opening adjacent the upper edge thereof, clamping means readily detachably gripped to the lintel, horizontally adjustable extension means carried by the clamping means adaptable to project outwardly beyond the fireplace opening, a firescreen, and vertically adjustable means attached to the upper end of the firescreen for securing the firescreen to the extension means.

2. In a fireplace construction having an opening, a lintel spanning said opening adjacent the upper edge thereof, clamping means readily detachably gripped to the lintel, horizontal extension means carried by the clamping means having at least one arm formed at a substantially right angle to the extension means, a firescreen, and vertically adjustable means attached to the upper end of the firescreen for securing the firescreen to the arm of the extension means.

3. The invention as defined in claim 2 wherein the extension means is adjustable to position the firescreen horizontally with respect to the face of the fireplace construction.

4. The invention as defined in claim 3 wherein the adjustable means is employed to position the firescreen in a vertical plane with respect to the fireplace construction.

5. In an upright fireplace construction having an opening, a lintel spanning said opening adjacent the upper edge thereof, clamping means readily detachably gripped to the lintel, extension means adjustably connected to the clamping means to be moved in a horizontal plane with respect to the fireplace construction, fastening means securing the extension means to the clamping means, a firescreen and vertical adjustable means attached to the upper end of the firescreen for securing the firescreen to the extension means.

6. The invention as defined in claim 5 wherein the clamping means comprises, a pair of jaw members separated by the lintel, and means connecting the jaw members for differentially moving the members toward and away from each other.

7. The invention as defined in claim 6 wherein one jaw member of the pair includes an upright extension engageable with one side of the lintel and the other jaw member includes a hook-like projection engageable with the lintel on its side opposite the engagement with the extension.

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