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2,915,960

WALL-MOUNTED INDOOR OR OUTDOOR COOKING FIREPLACE

Filed June 13, 1958

3 Sheets-Sheet 1

FIG. 2.

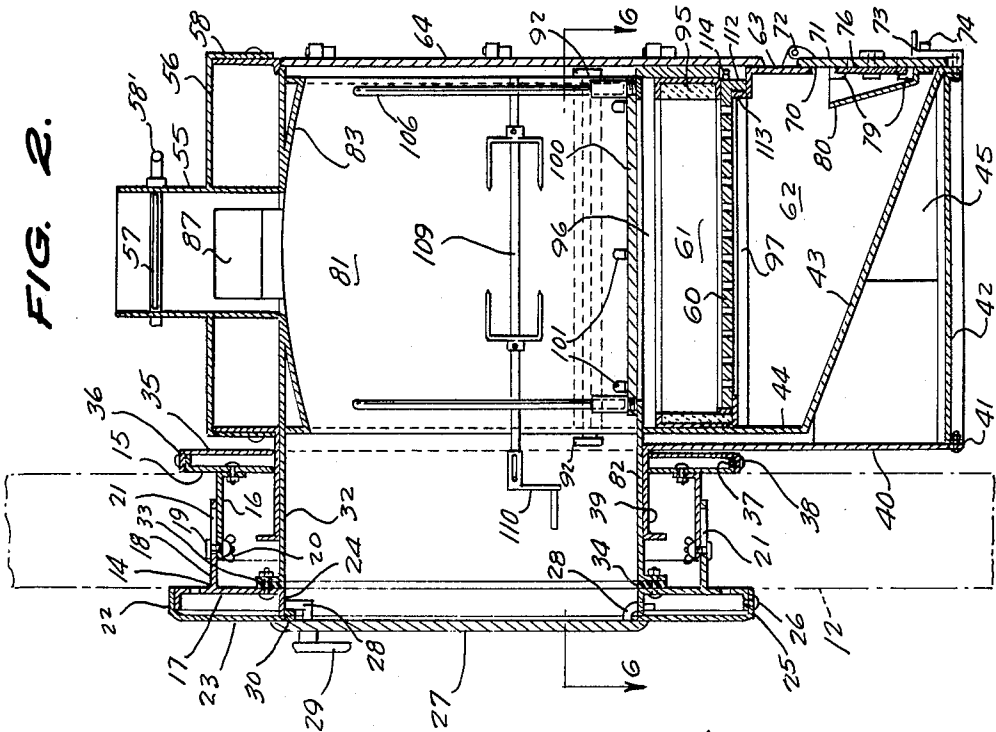
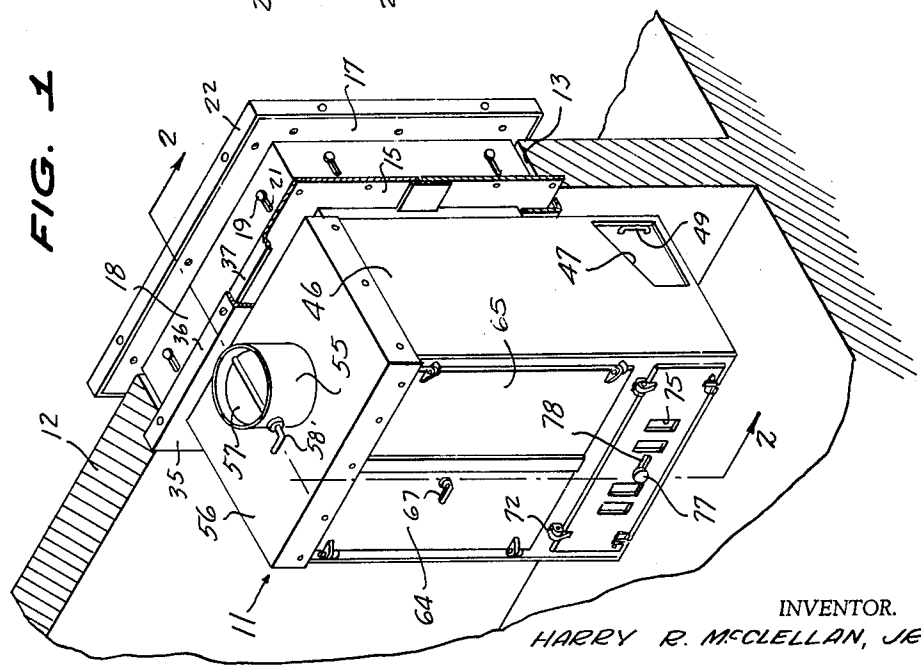


FIG. 1



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FIG. 3.

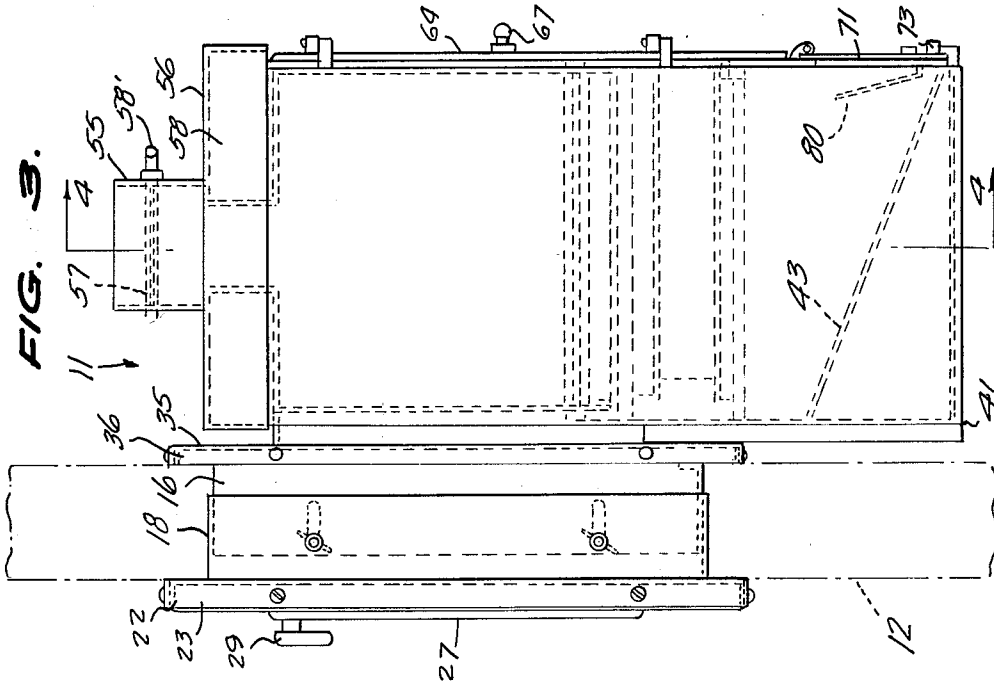
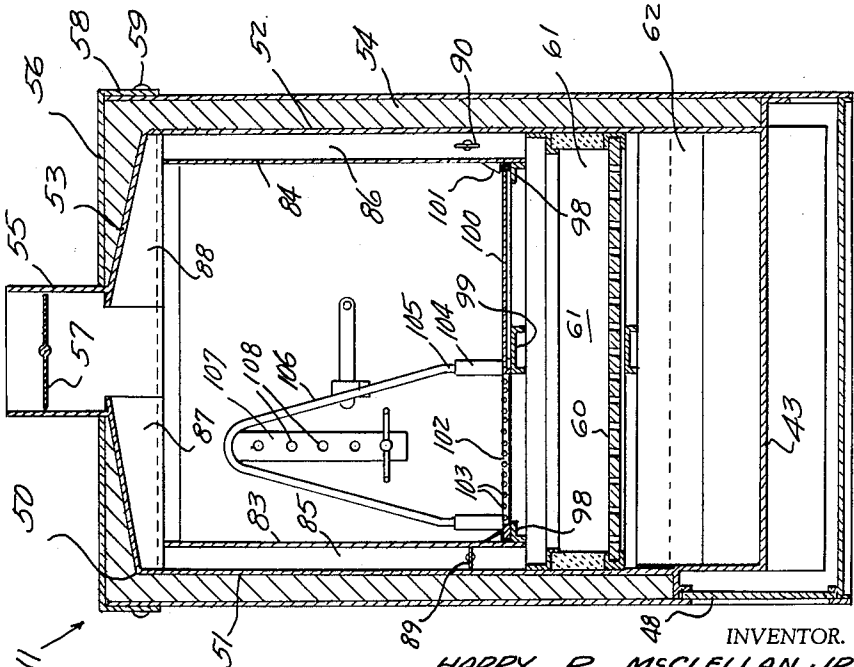


FIG. 4.



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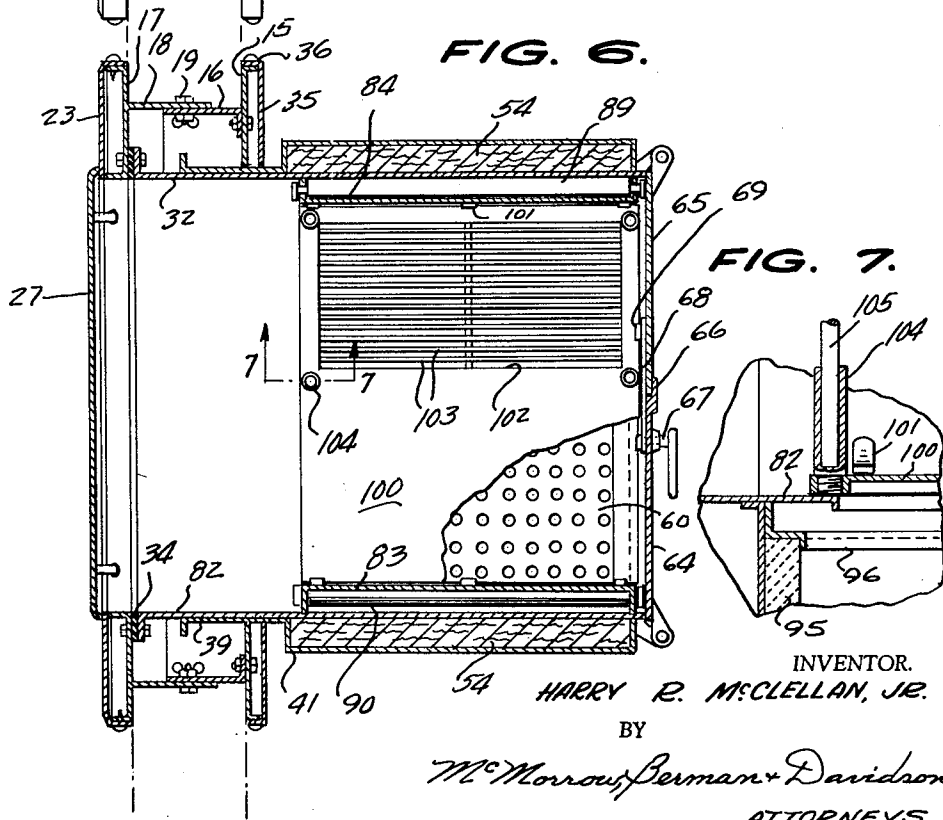
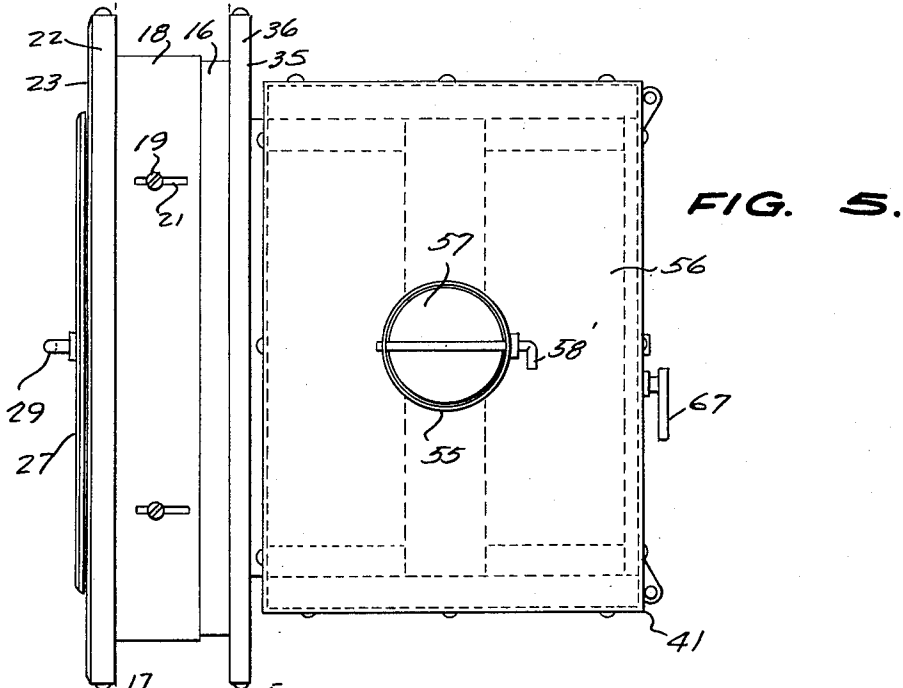


FIG. 7.

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WALL-MOUNTED INDOOR OR OUTDOOR COOKING FIREPLACE

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3 Claims. (Cl. 99-421)

This invention relates to cooking fireplaces, and more particularly to a cooking fireplace adapted to be installed in a building wall and being accessible either from inside or outside the building.

A main object of the invention is to provide a novel and improved wall-mounted cooking fireplace which may be used either as an outdoor fireplace or which may be used from inside a building, the fireplace being simple in construction, being easy to install and being capable of burning any common fuel, such as charcoal, coal or wood.

A further object of the invention is to provide an improved wall-mounted cooking fireplace which is self-supporting, which is inexpensive to manufacture, which is durable in construction, and wherein the cooking elements are readily detachable for cleaning and may be removed either from inside the building or from outside thereof.

A still further object of the invention is to provide an improved wall-mounted cooking fireplace which includes improved flue means so that the fireplace will not smoke from either end when in use, which is further provided with means for accurately regulating the draft through the firebox thereof, which includes storage space for fuel and for the removable cooking elements thereof, and which is relatively inconspicuous in appearance.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a perspective view, partly in cross section, of an improved cooking fireplace constructed in accordance with the present invention, the view being taken from outside the building on which the fireplace is installed.

Figure 2 is an enlarged vertical cross sectional view taken on the line 2-2 of Figure 1.

Figure 3 is a side elevational view of the cooking fireplace to the same scale as shown in Figure 2.

Figure 4 is a vertical cross sectional view taken on the line 4-4 of Figure 3.

Figure 5 is a top plan view of the cooking fireplace, substantially to the same scale as Figures 2 and 3.

Figure 6 is a horizontal cross sectional view taken substantially on the line 6-6 of Figure 2.

Figure 7 is an enlarged cross sectional detail view taken on the line 7-7 of Figure 6.

Referring to the drawings, 11 generally designates a cooking fireplace according to this invention. The fireplace 11 is installed in the vertical wall 12 of a building, said wall being formed with a generally rectangular opening 13 at a location above ground level such that the fireplace 11 may be suspended from the wall within convenient reach of persons using same, as will be presently described.

Secured in the rectangular opening 13 is a generally rectangular frame designated generally at 14. The frame 14 comprises an outer frame plate 15 engageable on the outside marginal portion of the aperture 13 and

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provided with an inwardly projecting flange 16 extending into the rectangular aperture 13. Designated at 17 is an outer face plate which is secured on the inside surface of wall 12 around the aperture 13, the face plate 17 being provided with an inwardly extending flange 18 which slidably receives the flange 16 of the outside face plate 15. Flange 16 is secured to flange 18 by bolts 19 extending through transverse slots formed in flange 18 and through apertures provided in flange 16, as shown in Figure 2, the bolts 19 being provided with wing nuts 20. Thus, the bolts 19 secure flange 16 within flange 18 with the face plates 15 and 17 respectively in close abutting engagement with the outside and inside surfaces of wall 12 around the aperture 13.

The inside face plate 17 is provided with a peripheral, outwardly projecting flange 22 at its outer edge and with an outwardly projecting flange 24 at its inner edge. A cover plate 23 is engaged over the outer peripheral flange 22, said cover plate being provided with a peripheral flange 25 which slidably receives the peripheral flange 22 of face plate 17 and which is secured thereto by suitable fasteners, such as sheet metal screws 26. The cover plate 23 is thus fastened in abutment with the inner peripheral flange 24 of cover plate 17, as shown in Figure 2.

Designated at 27 is a removable, generally rectangular closure member which is provided at its bottom margin with depending positioning lugs 28 engageable in apertures provided therefor in the lower portion of the peripheral flange 24, the closure member 27 being provided at its upper portion with a rotatable locking bolt 28 having an external operating handle 29, the locking bolt 28 being engageable with a depending locking lug 30 provided on the top portion of flange 24. As will be readily apparent from Figure 2, when the locking bolt 28 is rotated downwardly and away from the lug 30, the closure member 27 is released and may be disengaged from the cover member 23 to provide access to the cooking stove interior, as will be presently described.

A rectangular shell member 32 extends through the aperture 13 and is provided with a peripheral flange 33 which is secured to the face plate 17, a suitable sealing gasket 34 of refractory material being interposed between flange 33 and face plate 17. The shell member 32 extends through the outer face plate 15 and through a cover plate 35 secured over the face plate 15, said cover plate being provided with a peripheral flange 36 which receives a corresponding peripheral flange 37 provided on the face plate 15 and is secured thereto by suitable fasteners, such as sheet metal screws 38.

Shell member 32 is of rectangular cross section and is slidably received in a rectangular sleeve member 39 projecting horizontally from the rear wall 40 of the rectangular main housing 41 of the exterior portion of the fireplace.

The housing 41 is provided with the bottom wall 42. Secured in the lower portion of the housing is a downwardly and outwardly inclined bottom partition plate 43 merging with a vertical plate member 44 secured in spaced parallel relationship to the vertical wall 40 of housing 41, and thus defining a storage compartment 45 in the lower portion of the housing. The lower portion of the side wall 46 of said housing is formed with an opening 47, and slidably mounted in the housing inwardly adjacent said opening is a cover plate 48 which may be moved forwardly, as viewed in Figure 1 by means of its operating handle 49, to provide access to the storage compartment 45. Said storage compartment may be employed to store fuel, such as wood, charcoal, or the like, or to store the removable spit components or other cooking utensils associated with the fireplace.

The vertical wall 44 forms part of an inner shell 50 having side walls 51 and 52, the bottom wall 43 and

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the top wall 53, as shown in Figure 4. Suitable refractory material, such as fire brick, or the like, shown at 54, is disposed in the space between inner shell 51 and the outer shell of housing 41. The inner shell is formed with an upwardly extending flue 55 which extends through a suitable aperture provided therefor in the top wall 56 of the main housing 41. Flue 55 is provided with a rotatable damper 57 having an external control handle 58, for regulating the draft through the flue.

As shown in Figure 4, the top wall 56 is provided with the depending peripheral flange 58 which is engaged over the top rim of the main housing 41 and which is secured thereto by suitable fasteners 59.

Secured in the lower portion of the inner shell 50 is a perforated grate 60 of suitable refractory material, defining a firebox 61 thereabove and an ash compartment 62 therebelow. The front vertical wall 63 of main housing 41 is provided with a pair of hinged doors 64 and 65, said doors being hinged at their outer edges to the side marginal portions of the front wall 63 and being arranged to overlap at their inner margins, as shown in Figures 1 and 6. Thus, the hinged closure member 64 is provided with an offset marginal flange 66 adapted to overlap the vertical margin of the hinged closure member 65 in the manner illustrated in Figure 6 when the closure members are in their closed positions. The closure member 64 is provided with a locking handle 67 which is rotatably mounted in the member 64 and which is provided at its inner end with a locking bar 68 engageable in a hook-like locking hasp 69 provided on the inside surface of the closure member 65, whereby the closure members are secured in closed positions in the manner illustrated in Figure 6 when the bar 68 is engaged in the hasp 69. To open the doors 64 and 65, the handle member 67 must be rotated to elevate the bar 68 out of the hasp 69, releasing the doors for outward swinging movement.

Hinged to the lower portion of the front wall 63 over an aperture 70 formed therein is a swingable closure member 71 which is adapted to cover the aperture 70, said aperture leading to the ash compartment 62. As shown in Figures 1 and 2, the bottom closure member 71 is hinged at its top margin to the wall 63, for example, by a pair of hinges 72, and the bottom margin of wall 63 is provided with rotatable locking bolts 73 which are movable into engagement with hasp members 74 provided on the closure member 71, as illustrated in Figure 2. The locking bolt 73 may be rotated downwardly to release the closure member 71, for swinging same forwardly and upwardly to an open position, to allow ashes to be emptied from the ash compartment 62. The closure member 71 is provided with a plurality of vents 75 and with a sliding valve plate 76 which may be adjusted to provide a desired degree of opening of the vent aperture 75. For this purpose a handle member 77 on the plate 76 extends through a horizontal slot 78 formed in the closure member 71, so that the plate 76 may be moved horizontally by means of its operating handle 77. Plate 76 is supported for sliding adjustments in suitable bracket elements 79, as shown in Figure 2.

An upwardly flaring guard member 80 is secured to the inside surface of the closure member 71 around the draft-regulating plate 76 to prevent ashes from interfering with said plate.

As shown in Figure 2, the shell member 32 forms part of a cooking compartment 81 extending over the firebox 61. Said compartment includes the bottom wall 82 of the shell member 32, and an arcuately curved top wall portion 83 leading to the flue 55 at its central portion and side wall elements 83 and 84 spaced inwardly from the side walls 51 and 52 of the inner shell to define vertical flue passages 85 and 86, as shown in Figure 4. The vertical flue passages 85 and 86 commu-

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nicate at their lower ends with the firebox 61 and at their upper ends with ducts 87 and 88 leading to the flue 55. Respective rotatable, horizontally extending dampers 89 and 90 are provided in the vertical flue passages 85 and 86, said damper members being provided at their respective ends with operating members 92 which are accessible either from inside the building when the closure member 27 is opened, or from outside the building when the closure members 64 and 65 are opened. Thus, the drafts may be regulated so as to provide a desired relative amount of movement of hot gases through the flue passages 85 and 86, whereby heat may be distributed either uniformly or may be concentrated at one side of the cooking compartment 81, depending upon the relative adjustments of the dampers 89 and 90.

The firebox 61 includes vertical refractory walls 95 of fire brick, or of similar refractory material, suitably fastened around the margins of the grate 60. Thus, respective top and bottom frames 96 and 97 are secured in the inner shell 50 to support the grate 60 and the refractory walls of the firebox 61.

Secured on the top frame 96 are transversely extending support members 98, 98, said support members being secured to the bottom marginal portions of the side walls 83 and 84 of the cooking compartment 81. An intermediate, transversely extending support member 99 is secured over the top frame member 96, as shown in Figure 4.

Designated at 100 is a cooking plate member which is slidably supported on the support members 98 and 99 and which is retained thereon by a plurality of inwardly projecting guide lugs 101 secured to the side walls 83 and 84, thus guiding the cooking plate 100 for sliding movement between said side walls. Thus, the cooking plate 100 may be moved either toward the inside of the building and toward the opening covered by closure member 27, or may be moved in the opposite direction, namely to the opening covered by the closure members 64 and 65.

The cooking plate 100 is formed at one side portion thereof with a large rectangular opening 102 in which are secured the parallel grill rods 103, defining a cooking grill, the grill being located substantially between the intermediate support member 99 and one of the side support members 98.

Threadedly secured in the cooking plate 100 adjacent the respective corners of the grill aperture 102 are up-standing socket members 104 which receive the vertical lower ends 105 of a pair of inverted, generally U-shaped spit-supporting brackets 106.

As shown in Figures 2 and 4, each of the brackets 106 is provided with the vertical ends 105 slidably engageable in the vertical, generally cylindrical socket elements 104, so that the two bracket members 106 will be supported in opposing relationship, parallel to each other at the forward and rear marginal portions of the cooking plate 100. The bracket members 106 are formed with depending intermediate bar members 107, said bar members depending vertically from the bight portions of the bracket members 106 and being formed with spaced apertures 108 adapted to rotatably support the opposite end portions of the spit shaft 109 in the manner illustrated in Figure 2. As will be readily apparent, the spit shafts may be mounted so that its handle 110 may be accessible either from the inside of the building or from the outside thereof, since said shaft may be readily reversed on the bracket bars 107.

As above explained, the fireplace may be used from either inside the building or from outside thereof, since access to the cooking space 81 is available either by the removal of closure member 27 or by the opening of the hinged closure members 64 and 65. The fuel is placed in the firebox 61 by first removing the cooking plate 100. After the fuel is ignited and the fireplace is in operation,

the cooking plate 100 may be replaced and positioned over the firebox 61, as illustrated in Figures 1 and 4, and may be employed to cook food articles of the type normally cooked in barbecue devices, such as steaks, or the like. The spit device 109 may be employed to support articles to be roasted over the grate aperture 102, and as above explained, is accessible from either side of the fireplace. The draft may be regulated by suitable adjustment of the damper members 57, 89 and 90 and of the draft-regulating plate 76. After a period of use, ashes may be collected from the ash compartment 62 by opening the bottom closure member 71 in the manner above described.

As above mentioned, the refractory walls 95 of the firebox 61 are secured between the top and bottom frames 96 and 97. The grate member 60, however, is preferably slidably mounted on the bottom frame 97 so that it may be moved outwardly when the hinged closure members 64 and 65 are opened, whereby any residue, such as ashes, or the like, remaining on the top surface of the grate member 60 will be scraped therefrom and will drop into the ash compartment 62. Thus, cleaning of the grate 60 is facilitated, since residue remaining thereon will be scraped into the ash compartment 62 by merely pulling the grate member 60 outwardly. The grate member 60 is provided with a depending front flange 112 engageable with the forward member 113 of bottom frame 97, as shown in Figure 2, to limit the inward movement of the grate member and properly position same in the firebox 61. The grate member is provided with a suitable handle 114 which may be employed for moving the grate member outwardly when it is to be cleaned, as above described.

While a specific embodiment of an improved cooking fireplace adapted for mounting in a building wall and accessible from either inside or the outside of the building has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A cooking fireplace adapted for access from either the inside or the outside of a building, said fireplace comprising a pair of opposing generally rectangular frame plates having flanges projecting toward each other, the flange of one frame plate slidably receiving the flange of the other frame plate in telescopic engagement therewith, said telescoping flanges being engageable in an opening formed in a building wall with the frame plates engaging the opposite surfaces of the building wall marginally adjacent the opening, means securing the flanges together, a removable closure member on one frame plate, a stove compartment supported by said frame plate, hinged closure means on the wall of said stove compartment facing said removable closure member, a firebox in the lower portion of the stove compartment, additional apertured hinged closure means on the lower portion of said stove compartment wall, providing access to the bottom of said firebox, a flue at the top of said stove compartment, and a cooking plate member slidably mounted in said stove compartment above said firebox and substantially at the same level as the bottom portions of said frame plates.

2. A cooking fireplace adapted for access from either the inside or the outside of a building, said fireplace comprising a pair of opposing generally rectangular frame plates having flanges projecting toward each other, the flange of one frame plate slidably receiving the flange of the other frame plate in telescopic engagement therewith, said telescoping flanges being engageable in an opening formed in a building wall with the frame plates engaging the opposite surfaces of the building wall marginally adjacent the opening, means securing the flanges together, a removable closure member on one frame plate, a stove compartment supported by said frame plate, hinged closure means on the wall of said stove compartment facing said removable closure member, a firebox in the lower portion of said stove compartment, additional apertured hinged closure means on the lower portion of said stove compartment wall, providing access to the bottom of said firebox, a flue at the top of said stove compartment, transversely extending horizontal support means mounted in said stove compartment over said firebox substantially at the same level as the bottom portions of said frame plates, a cooking plate member slidably mounted on said support means and being movable through said frame plates, a pair of upstanding transversely aligned supporting brackets mounted on said cooking plate member, and a transverse spit member rotatably mounted on said supporting bracket.

3. A cooking fireplace adapted for access from either the inside or the outside of a building, said fireplace comprising a pair of opposing generally rectangular frame plates having flanges projecting toward each other, the flange of one frame plate slidably receiving the flange of the other frame plate in telescopic engagement therewith, said telescoping flanges being engageable in an opening formed in a building wall with the frame plates engaging the opposite surfaces of the building wall marginally adjacent the opening, means securing the flanges together, a removable closure member on one frame plate, a stove compartment supported by said frame plate, hinged closure means on the wall of said stove compartment facing said removable closure means, a firebox in the lower portion of said stove compartment, additional apertured hinged closure means on the lower portion of said stove compartment wall providing access to the bottom of said firebox, a flue at the top of said stove compartment, vertical flue passages at the opposite sides of said stove compartment and communicatively connecting said firebox to said flue, respective adjustable dampers in said vertical flue passages and said flue, transversely extending horizontal support means mounted in said stove compartment over said firebox substantially at the same level as the bottom portions of said frame plates, a cooking plate member slidably mounted on said support means and being movable through said frame plates, a pair of upstanding transversely aligned supporting brackets mounted on said cooking plate member, a transverse spit member rotatably mounted on said supporting brackets, said cooking plate member being formed with an opening located beneath said spit member, and a grill member mounted in said last-named opening.

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