May 11 , 1926. 1,583,805

E. F. SIELOFF

STOVE STRUCTURE

Filed June 13, 1925

Fig. 1

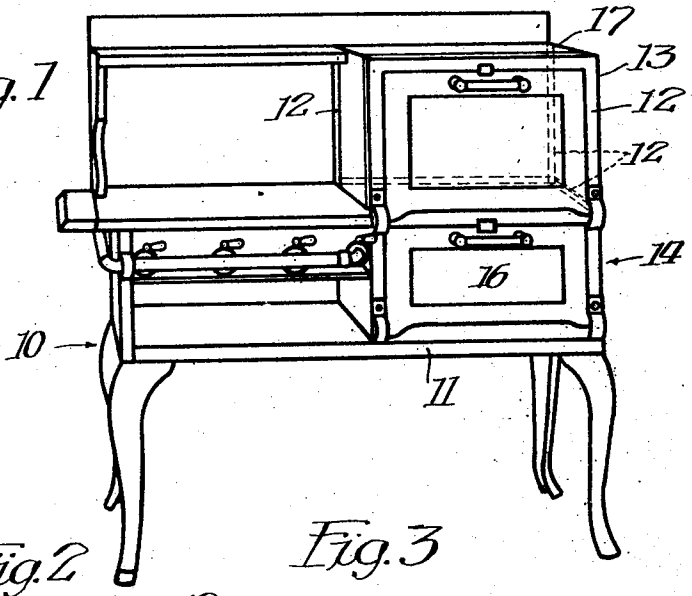



Fig. 2

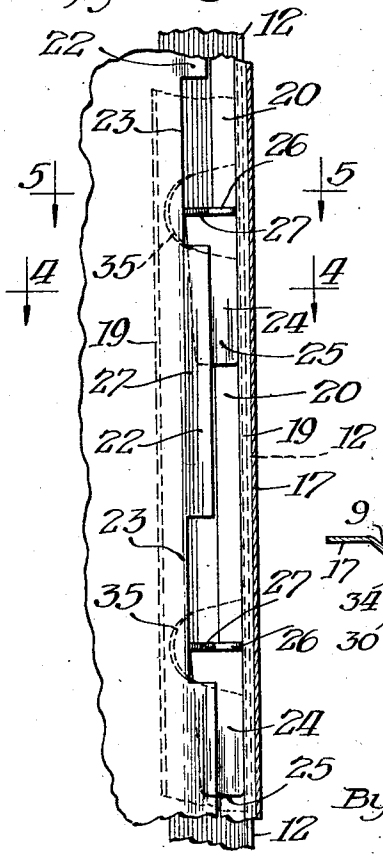



Fig. 3

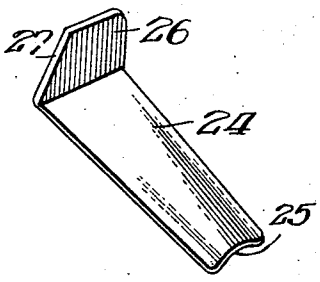



Fig. 4

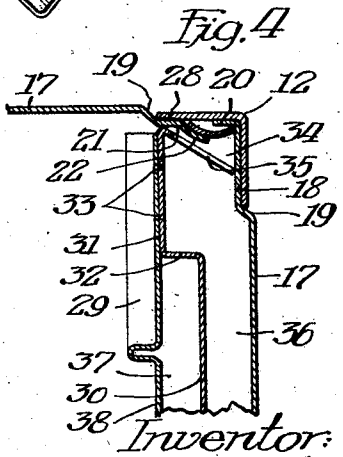
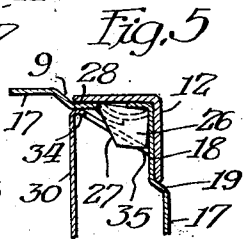



Fig. 5




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# UNITED STATES PATENT OFFICE.

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## STOVE STRUCTURE.

Application filed June 13, 1925. Serial No. 36,807.

My invention relates to stove construction and particularly to sheet metal structures such as the ovens of gas ranges and the attachment of the sides or panels thereof.

In stove construction, it is common practice to secure the panels or sides in position permanently or by means of bolts, rivets or the like, and especially where the panels or sides of ovens are enameled and become burnt or discolored from heat, or cracked, there has been no means for permitting convenient removal of the defective parts or walls and renewing and replacing the same with new and perfect parts. Furthermore, the fastening means render the stove unsightly in appearance.

The object of the present invention is, therefore, to overcome the above objections by providing simple and novel means for securing the panels and sides in position to the frame of the oven or other suitable parts, without perforating these parts or the frame or the employment of bolts or similar fastening means passing through the parts, and in which the fastening means are concealed from view so as to provide a strong, substantial and a neat and attractive structure which greatly improves the appearance of the stove or range.

The invention further consists in certain novel combinations and arrangement of parts to be hereinafter specified.

In the drawings:—

Fig. 1 is a perspective view of a gas range having the panels or walls thereof secured in position in accordance with the invention.

Fig. 2 is an enlarged fragmentary sectional elevation looking at the inside of the frame and walls, such as the oven structure, showing the application of the novel fastening means of the invention.

Fig. 3 is a perspective view of a wedge-key employed, and

Figs. 4 and 5 are horizontal sectional views taken on the lines 4—4 and 5—5, respectively, of Fig. 2.

Referring to the drawings in detail, and in Fig. 1, 10 designates a stove shown in the form of an elevated oven gas range, having the frame parts 11 and 12. The latter is employed in connection with the oven structure including the bake oven 13 and the broiler section 14 having doors 15 and 16. The frame as 12, is usually of angle metal and receives the door frames thereagainst and is adapted at the front and rear of the oven structure to receive within the webs or flanges thereof the usual panels or walls 17 of the oven which, heretofore, have been held in position by perforating the parts and connecting the same by bolts or the like, leaving the fastening means exposed, or by permanent securing means which render renewal of the walls difficult, if not impossible. Since some of the walls are usually enameled, such as the sides, it is desirable to provide means for conveniently renewing these parts, and it is for this purpose that the present fastening means has been devised.

In accordance with the invention, the walls 17 are provided with depressed portions 18 along their edges to provide shoulders 19 adapted to abut the edges of the angular frame parts 12. As shown, the depressed portions 18 fit within the flanges or sides of the frame, thus bringing the outer faces of the frame and panels or walls 17 substantially in alignment or said walls may project slightly beyond the frame in an outward direction. One of the side walls 17 is provided with an inwardly turned edge or flange 20, abutting the inner face of the other side or flange of the frame 12 and the rear panel or wall arranged at right angles thereto, or the inner edge of the adjacent flange of the frame is provided at the inner face with a flange or strip 21 having an inwardly offset portion 22 at its edge terminating in spaced relation to the side wall or depressed portion 18 thereof and providing a keyway between it and the rear flange of the frame 12. At spaced points the offset portion 22 is provided with elongated recesses or cut-outs 23 to permit the insertion of wedge-keys 24 between the offset portions thus provided and the flange 20.

It will be noted from Fig. 3 of the drawings that the keys 24 are convexed transversely as indicated at 25 and have heads 26 in the form of right angular portions at the large ends thereof, which heads have their outer edges beveled as at 27. These keys are

inserted in the recesses 23 beneath the offset portions 22 to exert a wedging or retaining action between the same and the flange 20 to firmly secure the panels or walls in position when the wedges are moved into place. The heads 26 may serve as means for applying the wedges as well as removing the same for convenient detachment of the parts in removing defective panels and replacing the same with perfect ones. Whether the depressed portions 21 are formed with the rear panels or separate therefrom, they may be securely attached to the inner face of the frame flange as by spot welding at suitable points, indicated at 28. This structure is preferable since the rear panel is usually of sheet metal without an enamel coating, whereas the sides are usually and preferably enameled for appearance and facility in cleaning.

The oven is usually provided with supports or ribs 29 for supporting trays or shelves, and these may be provided upon a lining 30 having an inwardly offset portion 31 produced by a shoulder 32. The offset portion may be provided with ventilating holes 33 and is further provided with a flange 34 extending in acute-angled relation to the plane of the lining to overlie the fastening means and associated parts whereby the same are concealed from view and an unsightly appearance avoided. This is rendered possible by providing the flange 34 with recesses 35 adapted to receive the heads 26 of the wedge-keys 24. The recesses are made sufficiently wide to permit necessary movement of the lining to insure proper fit.

The linings are usually snapped into position and held by interfitting engagement with the top and bottom of the oven and by the shelves, as is customary. The lining also forms an insulating air space 36 with the side 17 and may provide an additional ventilating flue 37 between it and a supplementary wall 38, although the lining may be made straight instead of being depressed inwardly as clearly shown in Figs. 4 and 5 of the drawings.

The beveled edge 27 of the head 26 of the wedges or keys 24 permit free insertion of the keys and better accommodation of the lining. It will also be apparent that by removing the lining, the keys are readily accessible and when removed from their seats will permit convenient detachment of defective or cracked sides or panels and replacement thereof by perfect parts.

Obviously, changes may be made in the details set forth without departure from the essentials of the invention as defined in the claims.

I claim as my invention:

1. In a stove construction, a frame member, a panel having engagement with the inner face thereof, an inwardly spaced flange along the adjacent portion of the frame member and a key frictionally inserted between said flange and the panel to removably secure the latter in position.

2. In a stove construction, an angular metal frame member, a wall having a depressed portion fitted against one side of the frame member, an inwardly offset flange secured along the inner face of the other side of the frame member and having recesses therein, and wedge-keys inserted in the recesses between the flange and the depressed portion of the wall to secure the latter in position.

3. In a securing means for panels of stove structures, the combination with a right angular frame member, a panel fitted against the inner face of one flange thereof, and having its inner edge directed angularly to contact with the inner face of the other flange, a wall secured to the inner face of one said flange and having its edge portion offset inwardly to provide a keyway, and a wedge-key inserted between said angularly directed portion of the panel and said offset portion to frictionally anchor the panel to the frame member.

4. In a securing means for panels of stove structures, the combination with a right angular frame member, a panel fitted against the inner face of one flange thereof and having its inner edge directed angularly to contact with the inner face of the other flange, a wall secured to the inner face of the latter flange and having its edge portion offset inwardly to provide a keyway, a wedge-key inserted between said angularly directed portion of the panel and said offset portion to frictionally anchor the panel to the frame member, and a lining having an angularly directed edge engaging the inner face of the panel and overlying the key and associated parts.

5. In combination with an angular member of the frame of an oven, a rear wall having a depressed portion anchored to the inner face of one flange and an inwardly offset portion therebeyond spaced from said flange, a side wall extending in back of the other flange of the frame member and having its rear edge turned at an angle in contact with the first-named flange, said inwardly offset portion having spaced cut-outs, and wedge-keys inserted in the cut-outs between the offset portion and angularly turned portion to detachably secure the side wall in position.

6. In combination with an angular member of the frame of an oven, a rear wall having a depressed portion anchored to the inner face of one flange and an inwardly offset portion therebeyond spaced from said flange, a side wall extending in back of the other flange of the frame member and hav-

ing its rear edge turned at right angles in contact with the first-named flange, said inwardly offset portion having spaced cut-outs, wedge-keys inserted in the cut-outs between the offset portion and angularly turned portion to detachably secure the side wall in position, said keys having angularly directed heads, and a liner having an acute-angled edge portion with recesses, said recesses adapted to accommodate said heads when the lining is mounted in position in spaced relation to the side wall and in engagement with the rear wall.

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