April 7, 1925. 1,532,839

A. G. SHERMAN

STOVE GRATE AND SUPPORT

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Fig. 1

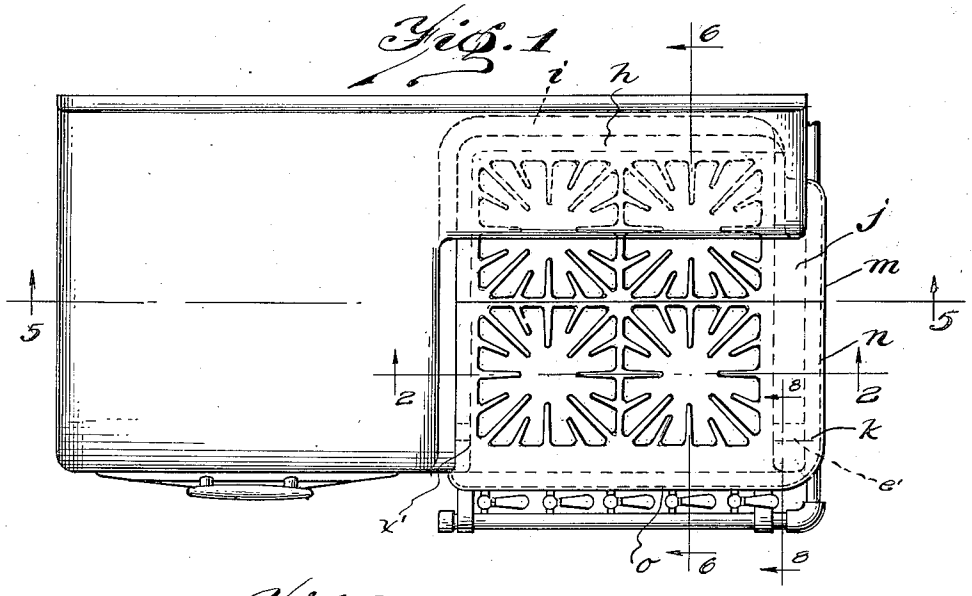


Fig. 2

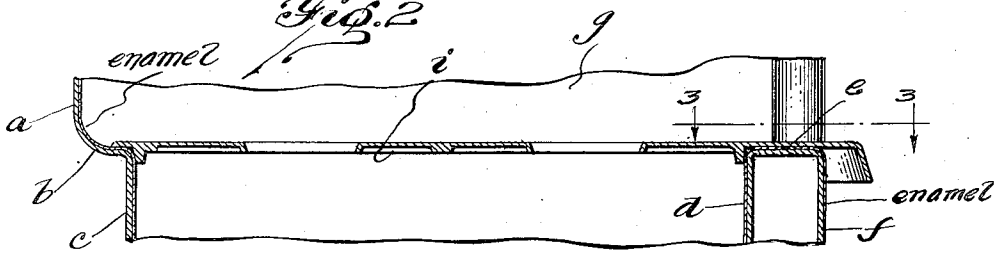


Fig. 4

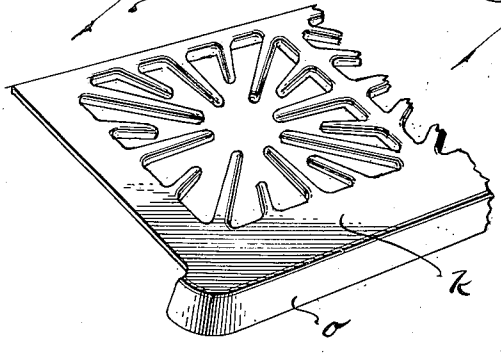
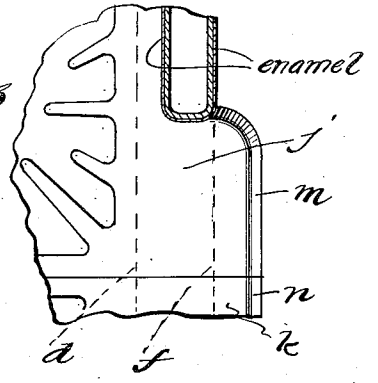


Fig. 3



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STOVE GRATE AND SUPPORT

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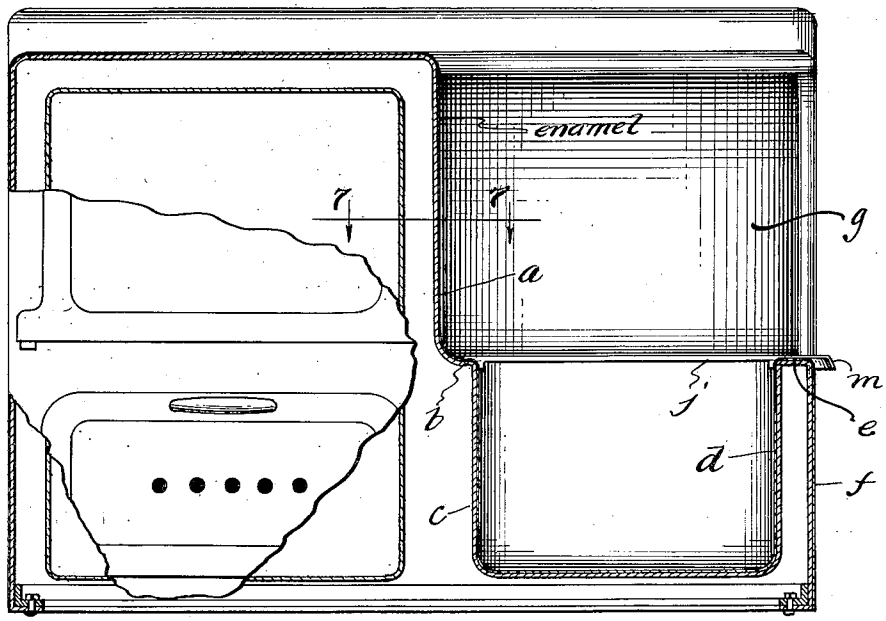


Fig. 5

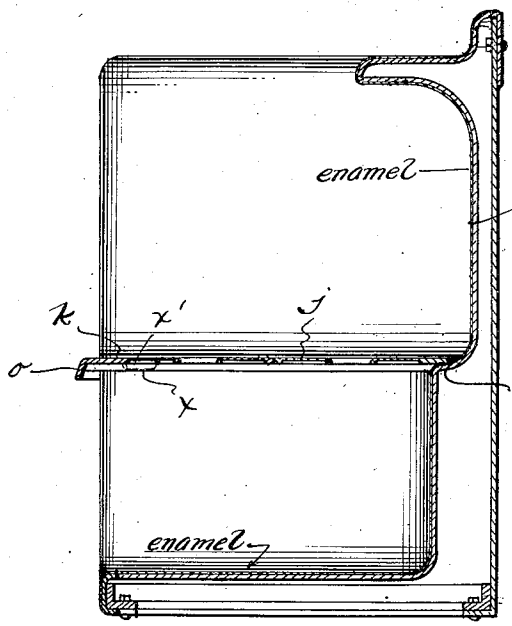


Fig. 6

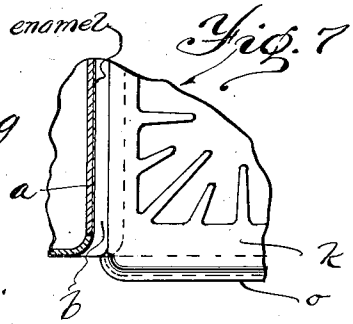


Fig. 7

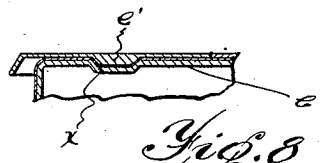


Fig. 8

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Patented Apr. 7, 1925. 1,532,839

UNITED STATES PATENT OFFICE.

ALVIN G. SHERMAN, OF DETROIT, MICHIGAN, ASSIGNOR TO DETROIT VAPOR STOVE COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

STOVE GRATE AND SUPPORT.

Application filed November 23, 1923. Serial No. 676,520.

To all whom it may concern:

Be it known that I, ALVIN G. SHERMAN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Stove Grates and Supports, of which the following is a specification.

This invention relates to stove construction and has for its object a new arrangement of the shell construction of a cooking stove to support the grates and do away with the usual grate supporting frame.

In gas and vapor stoves, the construction is tending toward enameled stoves and designs which make for cleanliness and sanitariness. A great many of the panels now used are enameled and may be easily wiped with a wet rag. However, in the present construction the so-called top of the stove is usually made up of a cast iron frame which where it is secured to the stove shell, makes unsanitary joints that can not be completely cleaned and affords deep crevices for the collection of grease, soil and other filth.

It is the object of the present invention to completely do away with the grate supporting frame and so form the sheet metal walls of the shell construction that these will form suitable seats on which to rest the grates. The grates themselves are provided with suitable aprons at the front and sides which drop down below the plane of the top for the purpose of giving a conventional appearance to the front and sides of the top, and for concealing the burners and other devices underneath the grate.

In the drawings:

Fig. 1 is a plan view of a gas or vapor stove employing my new grate construction.

Fig. 2 is a section taken on the line 2—2 of Fig. 1.

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Fig. 4 is a detail in perspective of the front grate.

Fig. 5 is a vertical section through the stove showing the warming chamber construction, taken on the line 5—5 of Fig. 1.

Fig. 6 is a vertical section taken from front to back, taken on the line 6—6 of Fig. 1.

Fig. 7 is a section taken on the line 7—7 of Fig. 5.

Fig. 8 is a section on the line 8—8 of Fig. 1.

In a companion application Serial No. 676,521 I have described and claimed an integrated stove construction made up of a plurality of sheet metal panels which are welded together at their edges to form a unit shell construction. This unit shell construction completely eliminates all seams and joints that would otherwise form crevices to collect dirt and soil. The entire shell unit may be enameled on the outside to make a clean and smooth surface which may be kept absolutely clean with a wet cloth. In this application, my new grate and grate supporting structure is shown and described but not claimed, as this grate construction can be obviously used in a structure where no welding takes place, although it is obviously a very valuable contribution to the sanitary stove of the character described in my companion application.

The oven wall *a*, or side splasher, jogs at *b* to form a shoulder, then continues down and forms the inside side wall of the warming chamber, or burner pit, which wall is designated *c*. It continues across the bottom of the warming chamber and then forms the other side wall *d* of the warming chamber. It is looped over at the top to form a grate seat *e*, then continues down at the outside in the wall *f* to form the outside of the stove or the warming chamber. This wall construction may be a single sheet of metal bent, or conceivably, it might be several pieces seamed together, in so far as the invention claimed in the present application is concerned.

A second sheet of metal forms the back splasher *g* and the shelf *h* and is jogged to form a shoulder *i* on which the rear grate rests at the back of the stove. This unit is preferably united to the first sheet metal unit described by welding the two edges in a butt seam, but obviously other means of uniting could be adopted so far as the invention claimed in the present application is concerned. The two jogs in the two panel sheets, viz: those that form the shoulders *b* and *i* and the seat *e* formed by the looping over of the panel at the side of the stove form appropriate resting places for the two grates *j* and *k*. No support for the front of the grates is required because these grates

are divided along a line running from side to side of the stove top rather than front to the back as is the usual practise. However, dips x are made in the shoulder b and the seat e to take the projections x' and e' to lock the front grate from sliding off. The rear grate is provided with a side apron m, which drops down a short distance at the side to provide the conventional covering at this point, that is ordinarily furnished by the frame of the stove. The front grate k is provided with the side apron n and front apron o that drops down at the front and sides to conceal the parts underneath in the conventional way.

Now, obviously, the grates may be removed by simply lifting them off; they then may be each easily cleaned. When the grates are removed, this leaves the warming chamber and back-splasher as one continuous and completely exposed structure that may be easily wiped with a rag. Especially is this true in such a structure as I have described and claimed in my companion application, where all the joints and crevices are eliminated by homogeneously uniting the panels edge to edge so that all the seams and crevices are eliminated. Preferably, the panels are enameled so as to afford an easily cleanable surface.

What I claim is:

1. In a cooking stove, an outer sheet metal shell construction forming the splasher board and provided with bent offsets continuing directly downward to form the burner pit and forming grate seats, and a removable grate structure which seats by gravity on the said grate seats, the seats and grates having interlocking portions to prevent the grates sliding off.

2. In a cooking stove, a shell construction provided with offsets to form grate seats and continuing down at the bottom to form the walls of the warming chamber and arranged to form a third seat at the side of the stove, and a removable grate structure resting on said seats by gravity and in removable relation, and provided with depending apron portions at the side and front.

3. In a cooking stove, a shell forming the side-splasher and the back-splasher, and provided with laterally offset portions continuing on to form the side and back wall of the warming chamber or burner pit, said shell formed into a third support at the side of the stove, and a pair of grates divided on a line running from side to side of the stove and resting on the two offset portions and the third support at the side of the stove.

4. In a cooking stove, a sheet metal shell construction forming the side-splasher and the back-splasher and offset outwardly to form grate supporting seats, and continuing down to form the side wall and back of the warming chamber or burner pit, the shell also provided with a sheet metal member that rises to the other side of the warming chamber or burner pit and then forms a loop and turns down to form the outside wall of the stove, said loop forming a third seat for the grates, and a grate structure removably seated on the two offsets and said loop.

5. In a cooking stove, a sheet metal shell forming the side-splasher and the back-splasher and offset to form grate seats, and continuing down to form the back and side wall of the warming chamber or burner pit, said shell also provided with an upright portion at the other side of the warming chamber or burner pit which is looped over and continues down to form the side wall of the stove, and a pair of grates divided along a line running from side to side of the stove and resting on the said offsets and said loop, and provided with depending aprons at the side of the stove and at the front of the stove.

6. In a cooking stove, a sheet metal stove shell formed to provide the two sides of the warming chamber or burner pit and two grate seats, and a pair of grates divided along a line running from side to side of the stove and bridging the warming chamber or burner pit, said grates resting by gravity on the said grate seats, and provided at the side and front of the stove with depending aprons.

7. In a cooking stove, a stove shell forming a warming chamber or burner pit in which the sheet metal forming the shell is formed to provide at each side of the warming chamber or burner pit and the back of the warmer chamber or burner pit, grate supporting seats, and a pair of grates bridging the warming chamber or burner pit from side to side, and removably supported on said seats and provided with suitable aprons depending at the front and side.

8. In a cooking stove, a stove shell forming a warming chamber or burner pit in which the sheet metal forming the shell is folded to form on each side of the warming chamber or the burner pit and at the back of the warming chamber or burner pit, two grate supporting seats which are an integral part of the sheet metal shell, and a pair of grates bridging the warming chamber or burner pit from side to side, the division line between the said grates running from side to side of the burner pit, the said grates being removably supported on the seats and free from support at the front of the burner shell and provided with suitable aprons depending at the front and at one side.

In testimony whereof I affix my signature.

ALVIN G. SHERMAN