Jan. 1, 1929. 1,697,371

T. A. SALA

HEATER GRILLE

Filed March 26, 1928 2 Sheets-Sheet 1

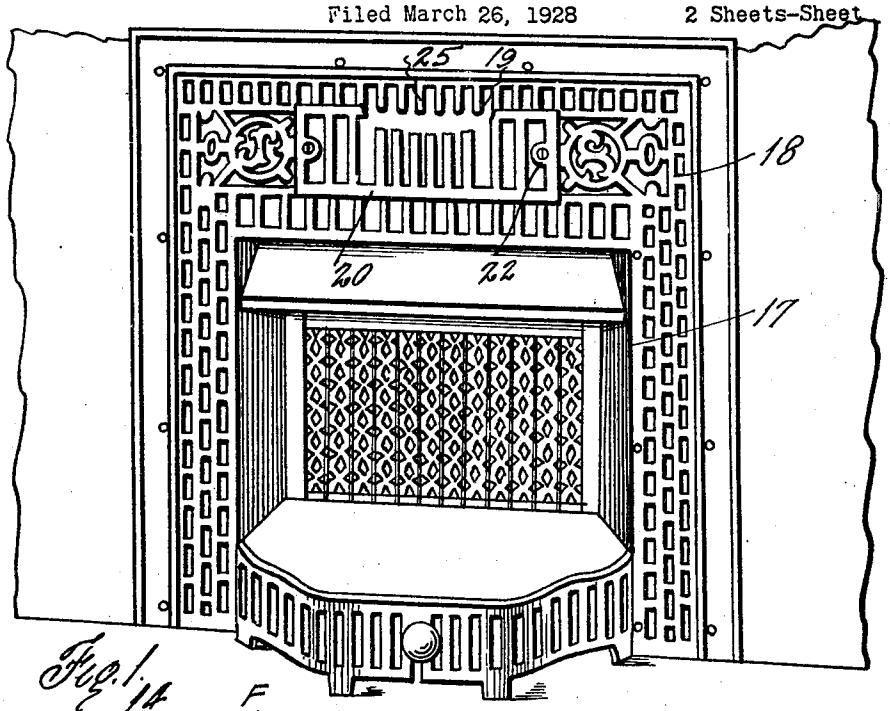



Fig. 1.

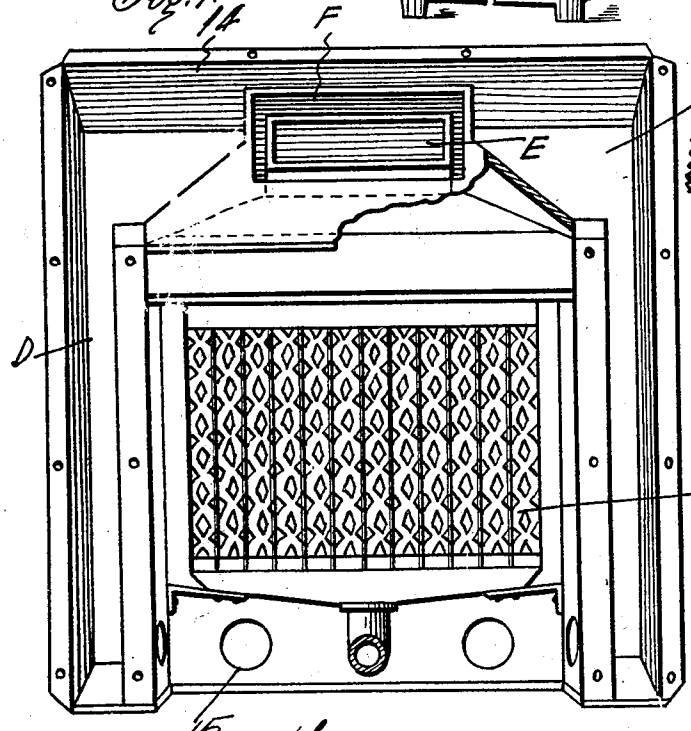



Fig. 2.

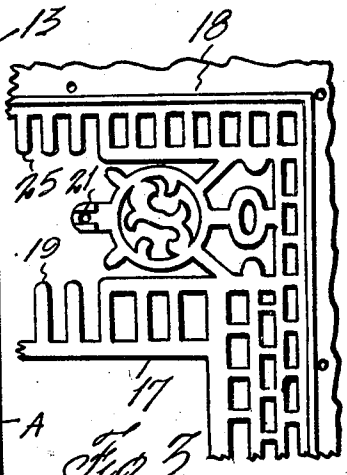



Fig. 3.

Inventor
T. A. SALA

By Jacke Ashley

Attorney

Jan. 1, 1929. 1,697,371

T. A. SALA

HEATER GRILLE

Filed March 26, 1928 2 Sheets-Sheet 2

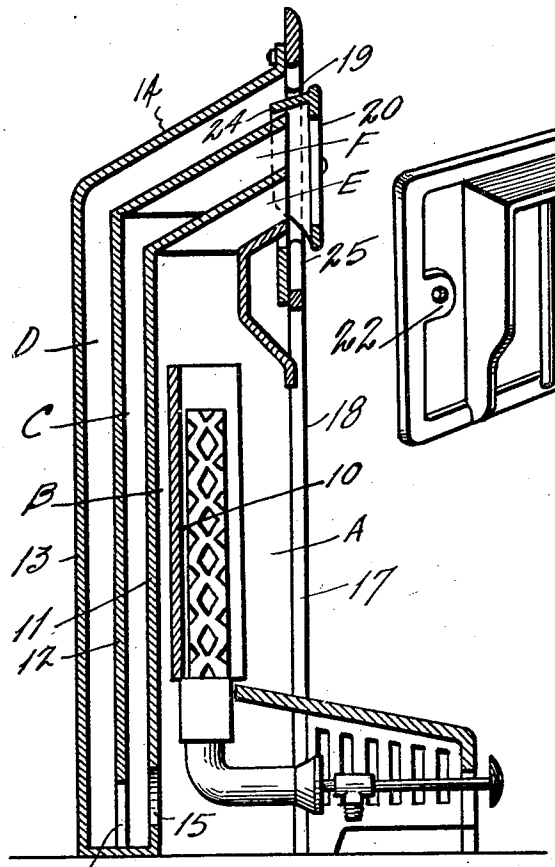



Fig. 4.

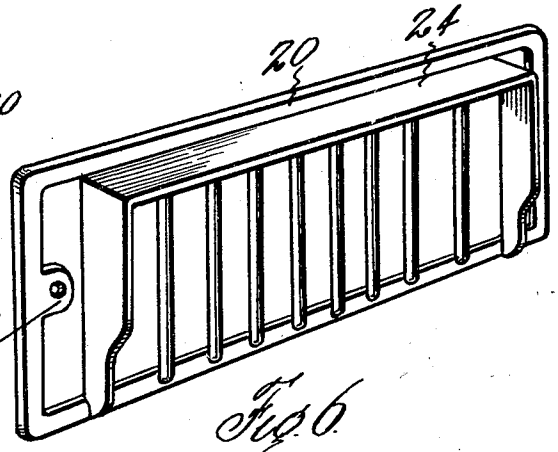



Fig. 6.

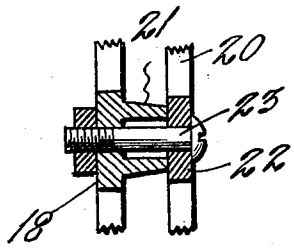



Fig. 7.

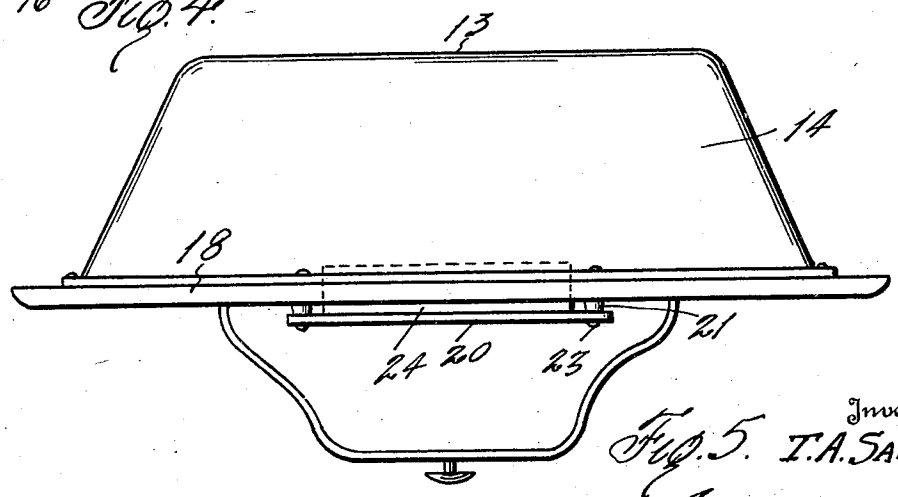



Fig. 5.

Inventor
T. A. SALA

By Jack & Ashley

Attorneys

Patented Jan. 1, 1929. 1,697,371

# UNITED STATES PATENT OFFICE.

THEODORE A. SALA, OF DALLAS, TEXAS.

## HEATER GRILLE.

Application filed March 26, 1928. Serial No. 264,646.

This invention relates to new and useful improvements in heater grilles.

One object of the invention is to provide a heater grille for use in connection with heat flues and arranged so that the transmission of heat from one portion of the grille to another portion thereof, will be negative.

Another object of the invention is to provide a grille for a plurality of flues arranged so that intensely heated portions of the grille are segregated from the surrounding portions of the grille.

A further object of the invention is to provide a heater grille having a section displaced therefrom for radiating and segregating the heat absorbed thereby and thus preventing overheating of the grille.

A still further object of the invention is to provide a grille for use with a heater and arranged to prevent the transmission of heat and to reduce the fire hazard.

A construction designed to carry out the invention will be hereinafter described, together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, in which an example of the invention is shown and wherein:

Fig. 1 is a perspective view of a grille constructed in accordance with the invention and applied to a multi-flue heater,

Fig. 2 is a front view of the heater with the grille removed,

Fig. 3 is a detail of the grille,

Fig. 4 is a vertical sectional view,

Fig. 5 is a plan view of the grille,

Fig. 6 is an isometric view of the heat dissipating section, and

Fig. 7 is a sectional view of the section joint.

In the drawings the numeral 10 designates the walls of a fire box A. An upright flue B is formed by a shell 11 spaced from the fire box, while a flue C is formed by a shell 12 and a flue D is formed by a jacket 13.

The fire box and the flue A discharge at their upper ends into a duct E and the flue C discharges at its upper end into a duct F. The jacket 13 has a top 14 spaced above the duct F. The shell 11 has openings 15 at its bottom, while the shell 12 has openings 16 at its bottom.

It will be seen that air may pass through the openings 15 and 16 and thus rise in the flues C and D, as well as in the flue B; consequently currents of air heated to different temperatures will be supplied to the ducts E and F and the top portion of the jacket. The fire box A is exposed through an opening 17 in a grille 18 which is attached to the jacket 13 and its top 14.

The air currents discharging through the duct E will be extremely hot because of the fact that they come direct from the fire box A and the flue B, and the air currents ejected from the duct F will also be heated to a high degree, but not so hot as those coming from the duct E. The air currents discharging from the side and upper portions of the flue D through the grille will not be so hot and in fact will be moderately cool. For this reason the heater may be mounted in walls and other places with a greatly reduced fire hazard.

It is apparent, however, that if the grille 18 covers the outlets of the ducts E and F the hot air currents would heat the grille and this by radiation would be carried to all parts of said grille, thus increasing the fire hazard. The main purpose of this invention is to dissipate the effects of these air currents upon the grille itself and prevent the transmission of excessive heat to the main body of said grille. In carrying this out the grille is provided with a transverse opening 19 contiguous to the ducts E and F and a grille section or panel 20 is mounted in front of this opening.

It is obvious that if the section 20 is supported out of contact with the body of the grille, heat from said section will not be transmitted to said grille. For supporting the section the grille at each end of the opening 19 is provided with split bosses 21 directed outwardly from its face and the section 20 is provided at each end with ears 22 located to engage said bosses. Screw bolts 23 passed through the ears and the grille body between the bosses, as is best shown in Fig. 7, support the section 20 with the least possible contact.

The section is made slightly larger than the opening 19 so as to conceal the same and the design of the grille and said section may, of course, be varied in accordance with the fancies of the manufacturer.

By reason of the forwardly projecting bosses the section is displaced or supported in front of the grille so as to permit a circu-

lation of air therebetween which will aid in preventing the transmission of heat from said section to the grille. In order to prevent the hot air currents from the ducts E and F spreading to the grille body, the section has on its rear side a hood 24 which extends across and down each side of the duct F, but is spaced therefrom. This hood causes the heated air currents to be discharged through the openings of the grille section.

As another means of preventing the transmission of heat, the upper and lower portions of the grille body contiguous to the opening 19 may be formed into fingers 25 thus obviating the use of solid bars and thereby dissipating more effectively the heat. It is obvious that the particular structure of the heater and flues is not essential to the invention which resides in the grille and displaced section.

It has been found that a grille constructed in accordance with this invention may be fastened to a wooden wall and kept sufficiently cool as to obviate all danger of a fire risk. It is highly important that the displaced section be used in connection with the multiple flues and by such use an intense heat may be generated in the fire box without unduly heating the body of the grille. It is obvious that the best results are had by reducing the contact between the section 20 and the body of the grille to a minimum.

Various changes in the size and shape of the different parts, as well as modifications and alterations, may be made within the scope of the appended claims.

What I claim, is:

1. The combination with a heater having a plurality of discharge ducts, of a grille having an opening through which said ducts are exposed, and a grille section covering the opening of the grille and displaced outwardly from said grille.

2. The combination with a heater having a plurality of discharge ducts, of a grille having an opening through which said ducts discharge, and a grille section attached to the grille and displaced outwardly from said grille, said section covering the grille opening and being free from contact with the grille except at isolated points of attachment.

3. The combination with a heater having a plurality of discharge ducts, of a grille having an opening through which said ducts discharge, a separate grille section covering the opening of said grille and displaced outwardly from the grille, and means for supporting the grille section, whereby the transmission of heat from the section to the grille is substantially eliminated.

4. The combination with a heater having a plurality of discharge ducts, of a grille having an opening through which said ducts discharge, a separate grille section covering the opening of said grille and displaced outwardly from the grille, and means for attaching the grille section at isolated points at each end to the grille, whereby a circulation of air between the edges of the section and the grille is obtained for interrupting the transmission of heat from the section to the grille.

5. A heat dissipating section for a grille having an open body and an outwardly projecting hood on its rear side.

6. The combination with a grille having an opening and a hot air duct having its discharge end contiguous to said grille opening, of a grille section displaced outwardly from the grille and covering said opening, and a hood on the rear side of said section projecting through said opening and overhanging the discharge end of the duct, but spaced therefrom.

7. The combination with a grille having an opening and a hot air duct having its discharge end contiguous to said grille opening, of a separate grille section, bosses on the grille at each end of the opening and means for attaching the section to said bosses, whereby said section is spaced from the grille and the transmission of heat from the section to the grille is prevented, except through said attaching means and said bosses.

In testimony whereof I affix my signature.

THEODORE A. SALA.