

Dec. 20, 1938.

G. SLAYTER ET AL

2,140,773

FLUE

Filed May 17, 1937

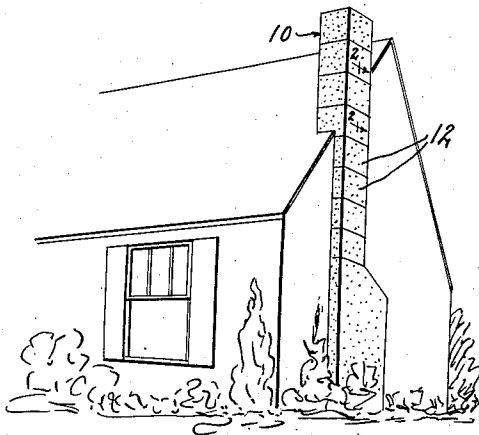


Fig. 1.

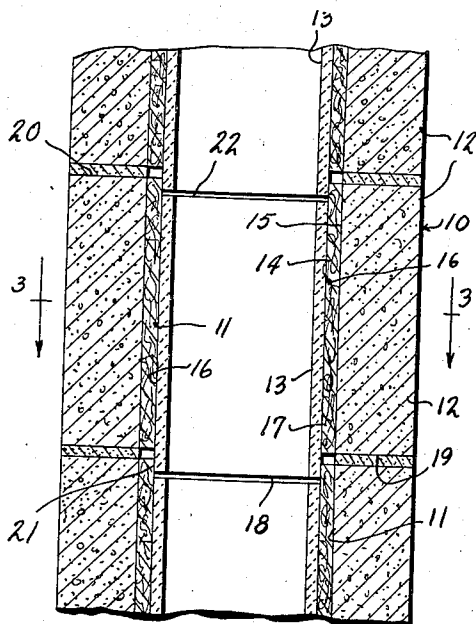


Fig. 2.

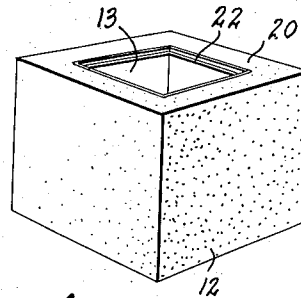


Fig. 4.

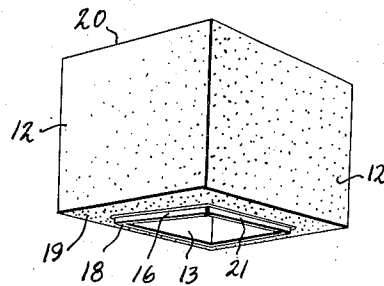
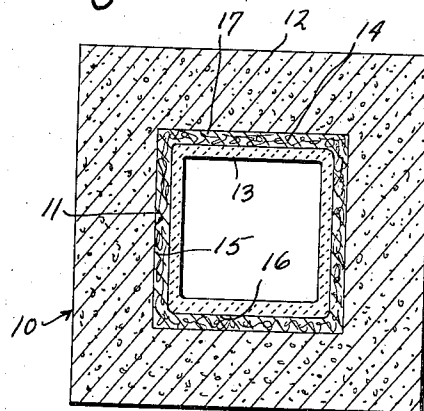


Fig. 5.

Fig. 3.



INVENTORS
 Games Slayter
 Howard W. Collins
 BY *Whittmore, Hulbert & Berkman*
 ATTORNEYS

UNITED STATES PATENT OFFICE

2,140,773

FLUE

Games Slayter and Howard W. Collins, Newark, Ohio, assignors, by mesne assignments, to The Ingleside Company, Newark, Ohio, a corporation of Ohio

Application May 17, 1937, Serial No. 143,204

3 Claims. (Cl. 72—94)

This invention relates generally to a flue construction and more particularly to a flue assembly embodying a lining in the form of tiles.

One of the principal objects of the present invention resides in supporting the lining within the flue by resilient means effective to compensate for expansion of the lining. With this arrangement cracking or breaking of the lining is prevented and effective operation of the flue under all conditions is insured.

A further object of the present invention consists in the provision of a lining having a cross sectional area less than the cross sectional area of the flue and held in the flue in spaced relation to the inner surfaces of the latter by means of a filler of sufficient resiliency to afford the necessary expansion of the lining relative to the flue.

A still further object of the applicants' invention is to provide a resilient fireproof spacing means between a flue and a lining capable of being compressed upon expansion of the lining relative to the flue and possessing the required body to hold the lining centrally in the flue.

The foregoing as well as other objects will be made more apparent as the description proceeds.

In the drawing:

Figure 1 shows a portion of a house with an assembled chimney embodying the invention;

Figure 2 is a cross section taken on line 2—2 of Figure 1;

Figure 3 is a cross section taken on line 3—3 of Figure 2;

Figure 4 is a perspective view of a top portion of a chimney block, and

Figure 5 is a perspective view of a bottom portion of a chimney block.

Although the present invention is capable of many and diversified uses, nevertheless it finds particular utility when employed in connection with a chimney construction, and such specific adoption is shown and described herein.

In detail, the chimney construction illustrated comprises a flue 10 having a passage 11 there-through for the flow of hot gases from the associated combustion chamber (not shown) and is formed of a plurality of apertured blocks 12 cemented or otherwise united together with the openings therethrough in alignment with each other to provide the passage 11. In accordance with common practice, the flue is provided with a lining 13 in the form of tiling and, in the present instance, a tile of suitable material is arranged in each of the blocks 12 and is shown as being of the same length as the block. The cross sectional area of the lining 13 is sufficiently less

than the cross sectional area of the passage 11 so that when arranged within the passage 11, a space 14 exists between the inner sides 15 of the block and the adjacent sides 16 of the lining. A resilient fireproof material 17 is packed or otherwise deposited in the space 14, and this material may be asbestos paper, mineral wool, glass wool or the like. In any event, this material must possess sufficient resiliency to afford the compression required to permit the expansion of the lining 13 relative to the blocks 12 when hot gases are directed through the flue, and, at the same time, the material must have sufficient body to hold the lining centrally within the flue.

It will be evident from the above that the cracking of linings caused by expansion within a rigid flue casing will be eliminated. Also, the above construction will add materially in decreasing the amount of heat radiating from the lining through to the flue because of the separation of the two by the porous filler.

It will be noted from Figures 4 and 5 that the bottom 18 of the lining 13 is allowed to extend a short distance beyond the bottom 19 of the block, in order to provide a recess in the opposite end 20 of the block. This arrangement allows for easy and proper alignment of the blocks when they are assembled, for the extending portion 21 of the lining of the upper block will seat in the recess 22 of the lower block. This, of course, will be extremely important when the blocks have tapered or irregular outer edges.

It will be apparent from the foregoing description that numerous modifications within the scope of the applicants' invention will be possible from this disclosure, and the applicants reserve the right to make such changes in the detail of construction and application as may fall within the purview of the appended claims.

What we claim as our invention is:

1. A flue construction consisting of a plurality of superimposed sectional flue units, each unit comprising an exterior block member having a passage therethrough, a frangible lining member also having a passage therethrough and disposed within the first mentioned passage, the cross section of said lining member being less than that of said first mentioned passage, and a resilient fireproof filler within the space between said block and said lining to resiliently support said lining member within said block member.

2. A flue construction consisting of a plurality of superimposed sectional flue units, each unit comprising an exterior block member having a

passage therethrough, a frangible lining member also having a passage therethrough, the cross section of said lining member being less than that of said first mentioned passage, said lining member
5 being disposed within the first mentioned passage in a manner to allow one end thereof to project beyond one end face of said block member, and a resilient fireproof filler within the space between said block and said lining to resiliently
10 support said lining member within said block member.

3. A preformed sectional flue unit comprising a flue block having a passage therethrough, a frangible lining also having a passage therethrough and disposed within the first mentioned passage, the cross section of said lining member being less than that of said first mentioned passage, and a resilient fireproof filler within the space between said block and said lining to resiliently support said lining member within said block member. 5

GAMES SLAYTER. 10
HOWARD W. COLLINS.