April 16, 1946. A. J. PAULETTE 2,398,393

CHIMNEY STRUCTURE

Filed Jan. 4, 1945

Fig. 1.

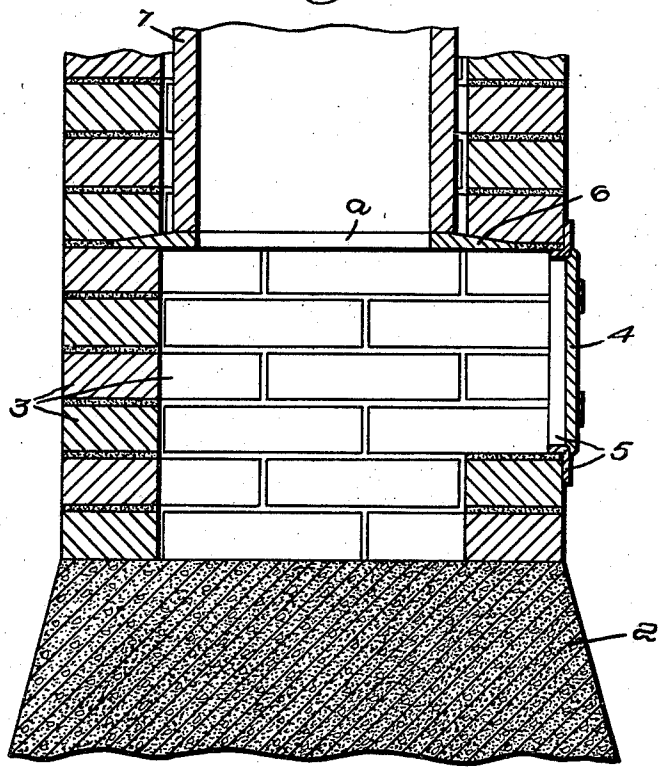


Fig. 2.

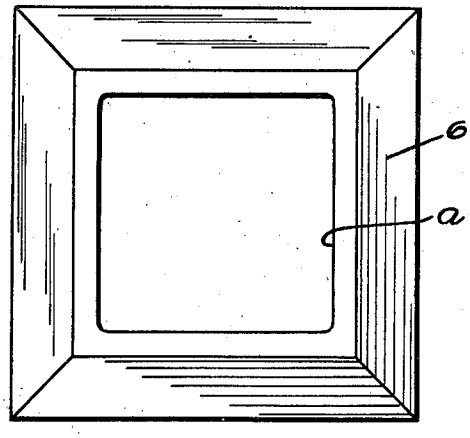
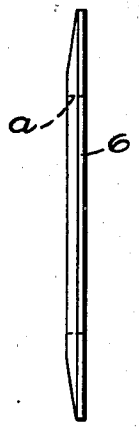


Fig. 3.



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CHIMNEY STRUCTURE

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2 Claims. (Cl. 72—94)

This invention relates to chimneys, and is more especially concerned with the problems arising in connection with the building and maintenance of chimneys of the smaller types, such as those used in dwellings, and the like.

So long as the practice prevailed of building the so-called "double chimney," very little trouble was experienced with maintenance of the chimney structure. In fact, many of those chimneys have been standing for over a century and they are still giving good service. In more recent years, however, the so-called "single" chimney, lined with tile, has taken the place of the double chimney because it can be built much more cheaply, and this construction is now used almost exclusively in new dwellings. If properly constructed, such chimneys are entirely satisfactory, but unless care is taken to support the lining securely, it will slip, and then trouble is very likely to ensue. This tile lining usually starts just above the level of the clean-out door, and an iron bar is supposed to be placed across the top of the clean-out opening at its inner end where it will serve as one of the supports for the bottommost tile. In addition, the bricks in this section of the wall should be so shaped and placed as to provide additional support for this bottom tile at other points around the flue.

In repairing scores of these single-walled chimneys, particularly during the last few years, applicant has found that in very nearly all of them repairs have been made necessary by the failure to provide a proper support for the tile lining when the chimney was originally built. Doubtless much of this difficulty has been due to the desire, and sometimes to the necessity, of reducing the cost of building the chimney, so far as possible.

The present invention aims to improve chimney constructions with a view to eliminating the troubles above described, while at the same time reducing the labor involved in building structures of this type. The invention also provides a novel chimney plate.

The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawing, and the novel features will be particularly pointed out in the appended claims.

In the drawing,

Fig. 1 is a vertical, sectional view of the lower part of a chimney structure embodying features of this invention;

Fig. 2 is a plan view of a novel chimney plate or "starter" plate provided by this invention; and

Fig. 3 is an edge view of said plate.

In the construction shown in the drawing, a chimney foundation, which may be of any suitable character, is indicated at 2. Supported on it is the lower brick and mortar section of a single wall chimney, certain parts of which are indicated at 3. In this section, also, is the usual clean-out door 4 and the frame 5 for said door. Just above the opening for this door, a starter plate 6 is built into the wall. As best shown in Figs. 2 and 3, this device consists of a rectangular plate, preferably made of cast-iron, and of dimensions suited to the requirements of the chimney being built. Usually these chimneys have flue sizes which may for example, be 8 x 8 inches, 8 x 12, or 12 x 12, or some other dimensions suited to the requirements of the building in which the chimney is located. The plate shown is typical for any of these common sizes but may be made in other sizes and shapes, as desired. It is provided with an aperture *a* of approximately the flue size, and the web of this plate is made relatively thick immediately around the aperture but this thickness is gradually reduced to a dimension such that the entire plate can readily be concealed in the wall. For ordinary flue sizes, such as those above indicated, the outer edge of the plate will be in the neighborhood of one-quarter of an inch in thickness and the inner edge about three-quarters of an inch thick. The thin edge makes it convenient to mount this plate in the wall so that no substantial variation in the width of mortar line is necessary at the outer surface of the wall.

In building this section of the chimney, the plate 6 is usually set into the wall immediately after the clean-out door frame 5 has been put into place and mortared in. Next the mason proceeds to lay up the wall, as usual, for a few courses. Then the lowermost tile 7 is set into place, as shown in Fig. 1, with its lower end resting on the strong inner margin of the starter plate 6. The opening in the tile should be registered with the aperture *a* in the plate, and any pointing-up that may be necessary to hold it in this position should be done at this time. Thereafter the completion of the chimney is carried out in the usual manner.

It should be observed, however, that the plate 6 makes a solid, substantial foundation for supporting the lining. It is relatively inexpensive. If made of cast iron it will last for many years, and because less of the mason's time is required to set this plate in place than would be involved in making the usual masonry support for the lining.

this saving approximately offsets the cost of the plate, particularly since it eliminates the necessity for the iron bar which customarily has been placed across the chimney at the upper inner edge of the clean-out opening to support the front side of the lowermost tile. By far the most important advantage, however, is that the plate forms a good support for the lining and eliminates the liability of any section of this important element of the chimney structure slipping out of place.

While I have herein shown and described a preferred embodiment of my invention, it will be evident that the invention is susceptible of embodiment in other forms without departing from the spirit or scope thereof.

Having thus described my invention, what I desire to claim as new is:

1. A chimney structure of the character described, comprising a chimney wall, a clean-out door and a frame for said door, a starter plate supported in said wall at the top of said frame and provided with a central aperture of approximately the cross-sectional dimensions of the flue, the outer marginal portion of said plate surrounding said aperture being supported in the wall but the inner margin of the plate closely adjacent to said aperture projecting inwardly beyond the inner surface of said wall, a lining for said chimney resting on said inwardly projecting margin, the plate at said inner margin being substantially thicker than at its outer edge and at the latter being sufficiently thin to be concealed in said wall by a mortar line of approximately normal thickness, the part of said plate immediately behind said clean-out door frame supporting the portion of said wall above the clean-out opening in the wall.

2. A metal starter plate for chimneys, said plate being provided with a central aperture of approximately the length and width of the flue in which it is to be used, the outer edge of said plate having a thickness approximately equal to that of a mortar line, and the inner margin of the plate surrounding said aperture being of substantially greater thickness and having a flat top surface adapted to support the tile lining for a chimney and the upper surface of said plate between said lining supporting surface and said outer edge being sloped smoothly to said outer edge.

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