O. D. MOCK.

STOP FOR HOLLOW TILES.

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1,311,082.

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Fig. 1.

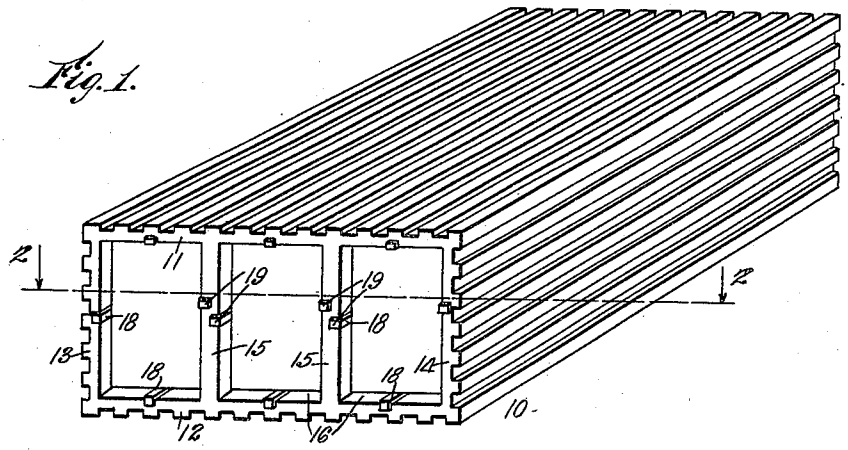


Fig. 2.

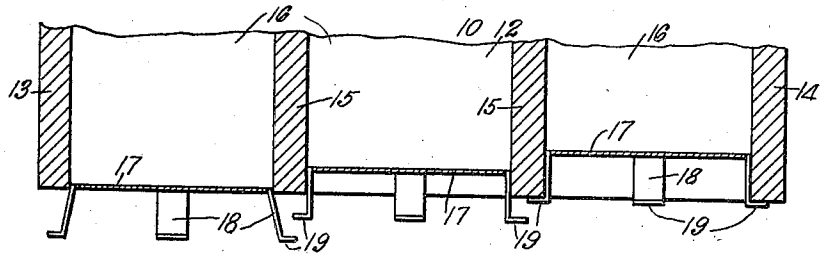


Fig. 4.

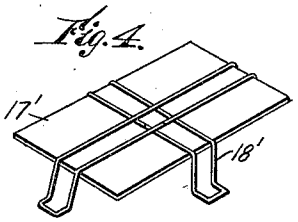
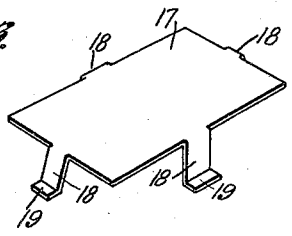


Fig. 3.



WITNESSES

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STOP FOR HOLLOW TILES.

1,311,082. Specification of Letters Patent. Patented July 22, 1919.

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To all whom it may concern:

Be it known that I, OTTO D. MOCK, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Stop for Hollow Tiles, of which the following is a full, clear, and exact description.

This invention relates to concrete building constructions and has particular reference to the treatment of hollow tiles that are used as a part of the building and particularly in connection with concrete beams or the like.

Among the objects of the invention is to provide a simple, cheap and reliable closure means for the end of a hollow tile that is placed in proximity to a space into which plastic concrete or the like is to be poured in the formation of a beam, girder or other building element, in order to prevent the plastic material from flowing into and more or less filling the cavity of the tiles.

In the usual practice in joining hollow tiles to concrete beams or stringer features of a concrete building the tiles are first stood on end and two or three inches of concrete is poured or rammed into the bottom end to serve as a plug. This practice, however, is objectionable for a number of reasons including the following: First, it is an expensive expedient with respect to time, labor and material; secondly, it fills up an unnecessary part of the tile cavity which is better left hollow; and, thirdly, it does not leave a free marginal portion of the tile that should be observed so as to insure the best adhesion between the end of the tile and the plastic beam to be formed. Furthermore this narrow space that I provide for the purpose of better adhesion provides also a positive interlock between the end of the tile and the beam.

A further object of the invention, therefore, is to provide a cheap plug or closure structure for the end of the tile that will meet all of the foregoing objections.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which

Figure 1 is a perspective view of a conventional form of hollow tile, one end of the cavities thereof being closed by my improvement.

Fig. 2 is a horizontal sectional detail on the line 2—2 of Fig. 1, showing the closure means in different stages of admission.

Fig. 3 is a detail perspective view of one of the plates detached; and

Fig. 4 is a view similar to Fig. 3 indicating a modification.

Referring now more specifically to the drawings, I show a hollow tile 10 having parallel wide walls 11 and 12, parallel edge walls 13 and 14, and intermediate walls or partitions 15. The spaces between the edge and partition walls are indicated at 16 which in standard tiles are of uniform cross sectional size and form. In the construction of a concrete building in which hollow tiles are to be built with their ends adjacent to a concrete beam it is desirable, for reasons above indicated, to so inclose or dam the ends of the spaces 16 as to prevent the concrete in plastic or semi-fluid state from bulging or flowing into such spaces. My invention, therefore, comprises the use of the device shown especially in Figs. 3 and 4, such device consisting of a relatively thin plate or sheet 17 of any suitable material such as metal, non-metallic composition, stiffened fabric, or any other device that has sufficient stiffness to withstand the pressure of the plastic concrete until it will have hardened in the usual way. Each of the plates is of a size to pass freely into and substantially fill the end of a space 16 except as now to be stated. I show for each plate a plurality of prongs 18 which may be stamped or otherwise formed from the same sheet of material as the main plate 17 and having angularly formed free ends 19. In the construction of the stop device the prongs are bent at an obtuse angle from the outer face of the plate 17 or so as to diverge from one another as shown at the left side of Fig. 2 and in Fig. 3. Hence while the plate is being forced into the space 16 the prongs will spring inward toward one another and so resist to a moderate degree such inward movement. This will insure the holding of the stopping device in proper position until the concrete is poured, and

the plate will be substantially centered with respect to the space or opening 16. The length of the prongs between the plane of the plate 17 and the plane common to all of the ends 19 will be a half an inch or more in practice in ordinary cases so that the plate 17 will lie or stand spaced inwardly accordingly from the extreme end of the tile leaving a space of a half inch or more into which the body of the plastic concrete will flow during the pouring action and so come into direct contact with practically the whole of the interior surface of the rim or end portion of the tile. This portion of concrete entering the end of the tile will set up naturally considerable adhesion with said interior surface and so augment the union between the tiles and the beams so formed. This portion moreover of the beam that projects into the tile constitutes, when hard, a lug positively preventing lateral displacement of the tile with respect to the beam of which the lug is a part.

Fig. 4 indicates one of many variations in construction of the stop member, this form indicating a plate 17′ of any suitable non-metallic material such as straw board or other stiffened fabric in which are embedded a plurality of loops 18′ of wire or the like forming prongs serving the same purpose as the prongs 18 and ends 19. Instead of being embedded in the plate 17′ the loops of wire or their equivalent may be fastened thereto by any other suitable means, the plate, however, in practice lying inward against the main portions of the loops.

The use of my stop means for the hollow centers of the tiles renders the operation exceedingly simple for instead of setting the tiles on end and ramming concrete or the like into them to form the closures which is not only expensive, but adds to the weight of the tiles in the subsequent handling, I now put the tiles in place and after the work is ready for the concrete beams to be poured I then slip the closure plates or stops into place as above indicated where they will automatically hold by friction. These devices furthermore may be cheaply made in any of the ways above suggested and hence the loss thereof in the construction is practically negligible.

I claim:

1. The combination with a hollow tile having an open end, of a stop member to close said open end to prevent the inflow of concrete, said stop member comprising a plate approximating in size and form the cross section of the opening, and having a plurality of narrow prongs extending outward therefrom and angularly disposed with respect thereto to limit the inward movement of the plate.

2. The herein described stop member for the end of a hollow tile, the same comprising a rectangular plate, and a plurality of resilient narrow prongs projecting from the edges of the plate in the same general direction but flared somewhat from one another, each of the prongs terminating in an end portion and at an angle to the main portion of the prong, said end portion occupying a plane in parallelism with the body portion of the stop.

3. The herein described stop member for the open end of a tile, the same comprising a rectangular plate approximating in size and form the cross section of the open end, and a plurality of narrow prongs of equal length extending from the edges of the plate in the same general direction, but flared outward slightly from one another, the ends of the prongs being bent to form tile-engaging means for limiting the movement of the plate inwardly of the tile.

OTTO D. MOCK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."