Nov. 7, 1944. E. F. BASSLER 2,362,236

MOLDED SHINGLE

Filed Feb. 13, 1943

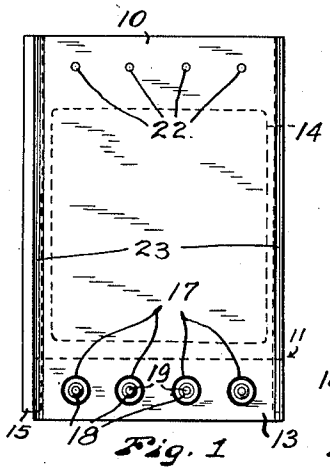


Fig. 1

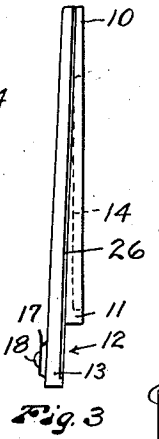


Fig. 3

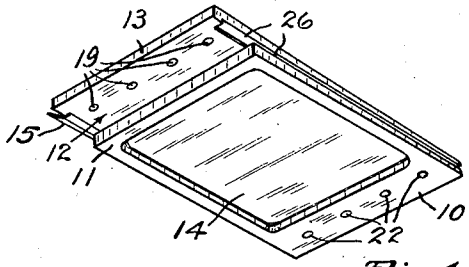


Fig. 4

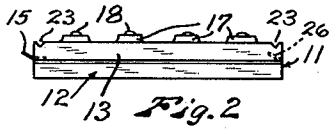


Fig. 2

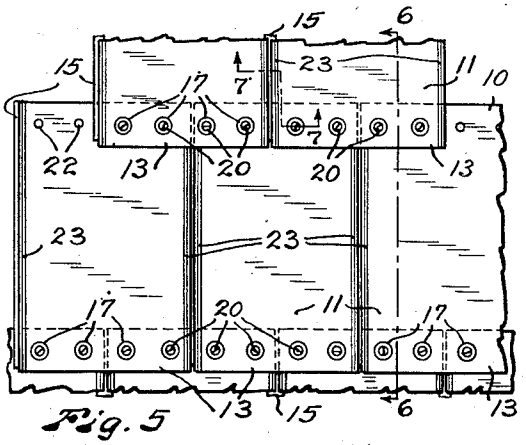


Fig. 5

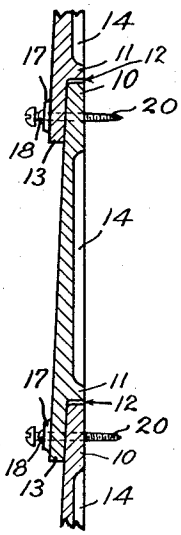


Fig. 6

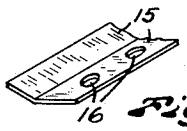


Fig. 8

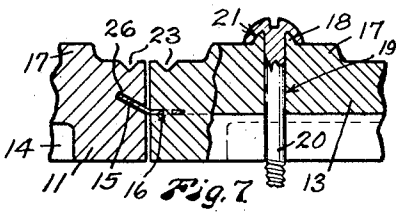


Fig. 7

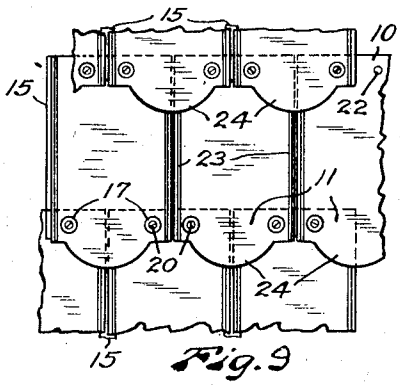


Fig. 9

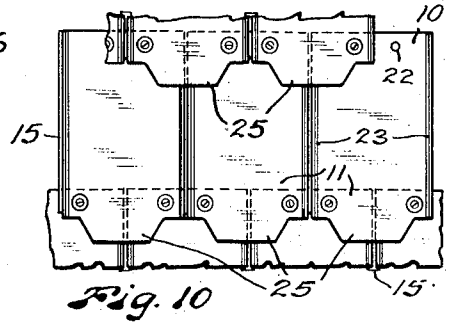


Fig. 10

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MOLDED SHINGLE

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Application February 13, 1943, Serial No. 475,837

5 Claims. (Cl. 108—10)

My invention relates to a molded shingle or slab to be used as roofing, siding or like surface covering and which, in the interst of brevity, is herein termed a shingle in the specification and claims.

Objects of my invention are to provide a plastic molded shingle of attractive appearance that is not expensive to manufacture, that is durable and long lasting, that is subject to very little expansion and contraction in response to temperature and moisture changes, that is efficient in excluding moisture in all forms, that is substantially fire-proof, fungus-proof and moss-proof and that may have a permanent color so that it will not require painting.

Other object are to provide novel and efficient gutter or trough means for joining the adjacent edges of shingles so as to prevent the entrance of moisture therebetween and to provide novel and efficient means to facilitate the securing of the shingles to the sheeting or wall and to safeguard against leakage around the securing means.

Other objects of the invention will be apparent from the following description taken in connection with the accompanying drawing.

In the drawing Figure 1 is a top plan view of a shingle constructed in accordance with this invention; Fig. 2 is an end view of the butt portion of said shingle; Fig. 3 is an edge view of said shingle; Fig. 4 is a perspective view showing the under side of said shingle; Fig. 5 is a plan view, on a smaller scale than the preceding figures, showing a plurality of these shingles as they may appear when laid; Fig. 6 is a sectional view on a larger scale than Fig. 5, taken substantially on broken line 6—6 of Fig. 5; Fig. 7 is an enlarged fragmentary sectional view taken substantially on broken line 7—7 of Fig. 5, showing moisture excluding gutter means and moisture excluding securing devices for securing the shingle to a supporting wall; Fig. 8 is a fragmentary perspective view of a metal trough or gutter member embodied in the invention; and Figs. 9 and 10 are two fragmentary plan views each showing a plurality of my shingles having butt portions of different ornamental shapes.

Like reference numerals designate like parts throughout the several views.

Figs. 1 to 8 show a shingle of rectangular shape which is tapered in longitudinal directions to provide a thinner tip portion 10 and a thicker butt portion 11. The thicker butt portion 11 has a notch 12 on its under side which leaves an overhanging lip portion 13. The notch 12 is adapted to receive the tip portions 10 of adjacent shingles when the shingles are laid.

Preferably the inside surface of each shingle is recessed at the time of molding, as indicated by 14 to conserve plastic material.

The two lateral edges of each shingle are substantially parallel. One lateral edge of each shingle is provided with a trough shaped gutter member 15 which is preferably formed of non-corrosive metal and is embedded in the shingle at the time said shingle is molded. The edge portion of the gutter member 15 that is embedded in the shingle preferably has holes 16 therein into which the plastic material of which the shingle is molded enters at the time of molding. This anchors the gutter member 15 very firmly in the shingle. Obviously moisture can not pass around the portion of the gutter member that is embedded in the shingle. The other edge portion of the gutter member 15 extends outwardly and upwardly, as best shown in Figs. 2, 4 and 7.

The other lateral edge of each shingle is provided with a longitudinal groove 26 that extends inwardly and upwardly and that is adapted to receive the outwardly and upwardly extending portion of the gutter member 15 of an adjacent shingle. Preferably the gutter member 15 and groove 26 each terminate a short distance from the end of the overhanging lip 14 so that they are not visible from the butt end of the shingle.

The top surface of each shingle is preferably provided with two longitudinally extending drainage grooves 23 positioned near the lateral edges of the shingle and forming water channels adapted to direct water downwardly. The grooves 23 carry much of the water which would otherwise overflow the edges of the shingles into the gutters 15 and thus minimize the flow of water down the gutters 15.

The overhanging lip portion of each shingle is provided with a plurality of raised water-deflecting bosses 17 and each boss 17 has a centrally positioned rounded knob 18. A hole 19 extends through each knob 18 and boss 17 and through the shingle lip 13 on which the knob and boss are formed. Each hole 19 is adapted to receive a securing device, such as a screw 20, by which the shingle is secured to a support, such as sheeting or a wall. The head of each screw 20 has a concave under side 21 that fits snugly over the knob 18 and provides a connection which will preclude the entrance of mois-

ture. Preferably the screws 20 are formed of non-corrosive material.

The tip portion 10 of each shingle is provided with perforations 22 that are adapted to register with the holes 19 in the overhanging lip portions 13 so that each securing device will extend through a hole 19 in a lip portion and a perforation 22 in a tip portion.

Preferably at least two securing devices 20 are provided in the lip portion 13 of each shingle and each of these securing devices also extends through the underlying tip portion of an adjacent shingle. The screws 20 fit snugly but slidably in the holes 19 and 22 and are threaded into the sheeting or wall to which the shingles are secured. These screws 20 will not become loose but will always hold the shingles tightly to the supporting wall to which they are attached.

If desired the threads on the screws and the screw driver slots in the heads of the same may be omitted, in which instance the screws become nails which may be driven in the usual manner to make the shingles fast to a support.

In Figs. 1 to 7 I have shown four screws in the overhanging lip portion of each shingle while in Figs. 9 and 10 I show two screws in each overhanging lip portion, it being understood that the number of securing devices may be varied.

The shingles shown in Figs. 9 and 10 are similar to the shingles shown in Figs. 1 to 8 inclusive except that in Fig. 9 the extremity 24 of the lip portion of the shingle is rounded and in Fig. 10 the corresponding extremity of the lip portion is formed along hexagonal lines, the object being to provide variations in ornamental effects. Obviously other ornamental designs may be used.

These shingles may be molded of any durable waterproof plastic material. One material suitable for this purpose is non-absorbent phenolic or urea plastic with ground flour wood filler.

In the laying of these shingles preferably two shingles are always matched together as respects the interfitting gutter member 15 and groove 26 of their adjoining edges before the first of these shingles is secured to the wall or sheeting. Thus no shingle is nailed or screwed down until after the gutter member 15 of the next adjacent shingle has been inserted in the groove of the shingle that is being fastened down.

This molded shingle is very durable, is highly efficient in excluding both moisture and drafts of air, is a good insulator against heat and cold or temperature variations, is substantially fireproof, moss-proof and fungus-proof and does not require any painting or staining.

The foregoing description and accompanying drawing clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that changes may be made within the scope and spirit of the following claims.

I claim:

1. A molded shingle comprising a shingle body having two straight parallel lateral edge portions; a longitudinally extending trough shaped metal gutter member embedded in one of said edge portions substantially in the medial plane of the shingle and extending outwardly and upwardly therefrom; and an inwardly and upwardly extending inclined longitudinal groove in the other edge portion of said shingle body, said groove having an opening positioned in the edge of the shingle substantially mid way between the top and bottom planes of the shingle adapted to receive the outwardly protruding inclined portion of the gutter member of the next adjacent shingle when the shingles are laid.

2. A molded shingle comprising a shingle body having two straight parallel lateral edge portions; a longitudinally extending trough shaped metal gutter member embedded in one of said edge portions substantially in the medial plane of the shingle and extending outwardly and upwardly therefrom, the embedded portion of said gutter member having holes therein into which the material of the molded shingle enters to securely anchor said gutter member to said shingle; and an inwardly and upwardly extending inclined longitudinal groove in the other edge portion of said shingle body, said groove having an opening positioned in the edge of the shingle substantially mid way between the top and bottom planes of the shingle adapted to receive the outwardly protruding inclined portion of the gutter member of the next adjacent shingle when the shingles are laid.

3. A molded shingle comprising a shingle body having a butt end portion notched on its under side to provide a lip adapted to overhang the tip portions of shingles in the next adjacent row below and having two straight parallel lateral edge portions; a longitudinally extending trough shaped metal gutter member embedded in one of said edge portions and extending outwardly and upwardly therefrom substantially in the medial plane of the shingle and substantially flush with the lower surface of said lip;, and an inwardly and upwardly extending inclined longitudinal groove in the other edge portion of said shingle body, said groove having an opening positioned in the edge of the shingle and substantially in the medial plane of the shingle and substantially flush with the under surface of said lip, said gutter member and said groove both terminating short of the butt end of the shingle so that they will be invisible when the shingles are laid, said groove being adapted to receive the trough shaped gutter of an adjacent shingle.

4. A molded shingle having a plane outer surface; outwardly protruding water diverting bosses on said plane outer surface; a water diverting knob provided on the top portion of each boss; shingle securing means extending through said shingle and said bosses and knobs; and a head on each shingle securing means positioned on and engaging the top portion of one of said knobs.

5. A molded shingle having a plane outer surface; a water diverting boss provided on said plane outer surface; a rounded knob provided on said boss; a transverse perforation in said shingle extending through said knob and said boss; a securing device insertable through said perforation; and a head on said securing device having a concave inner side fitting over said knob and excluding water from said perforation.

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