

May 2, 1939.

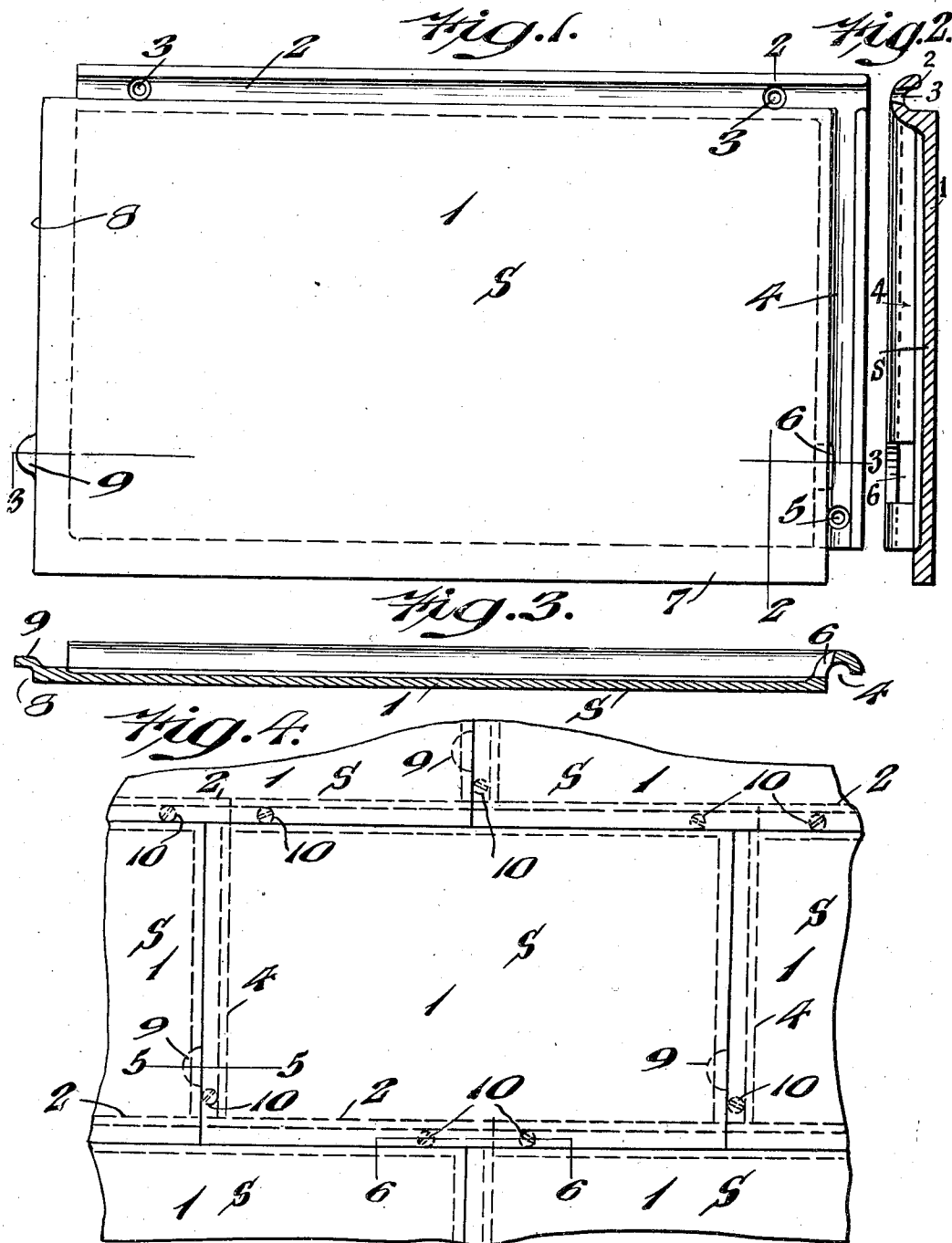
E. A. CORBIN, JR

2,156,277

HOUSE CONSTRUCTION

Filed March 22, 1937

4 Sheets-Sheet 1



INVENTOR
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BY
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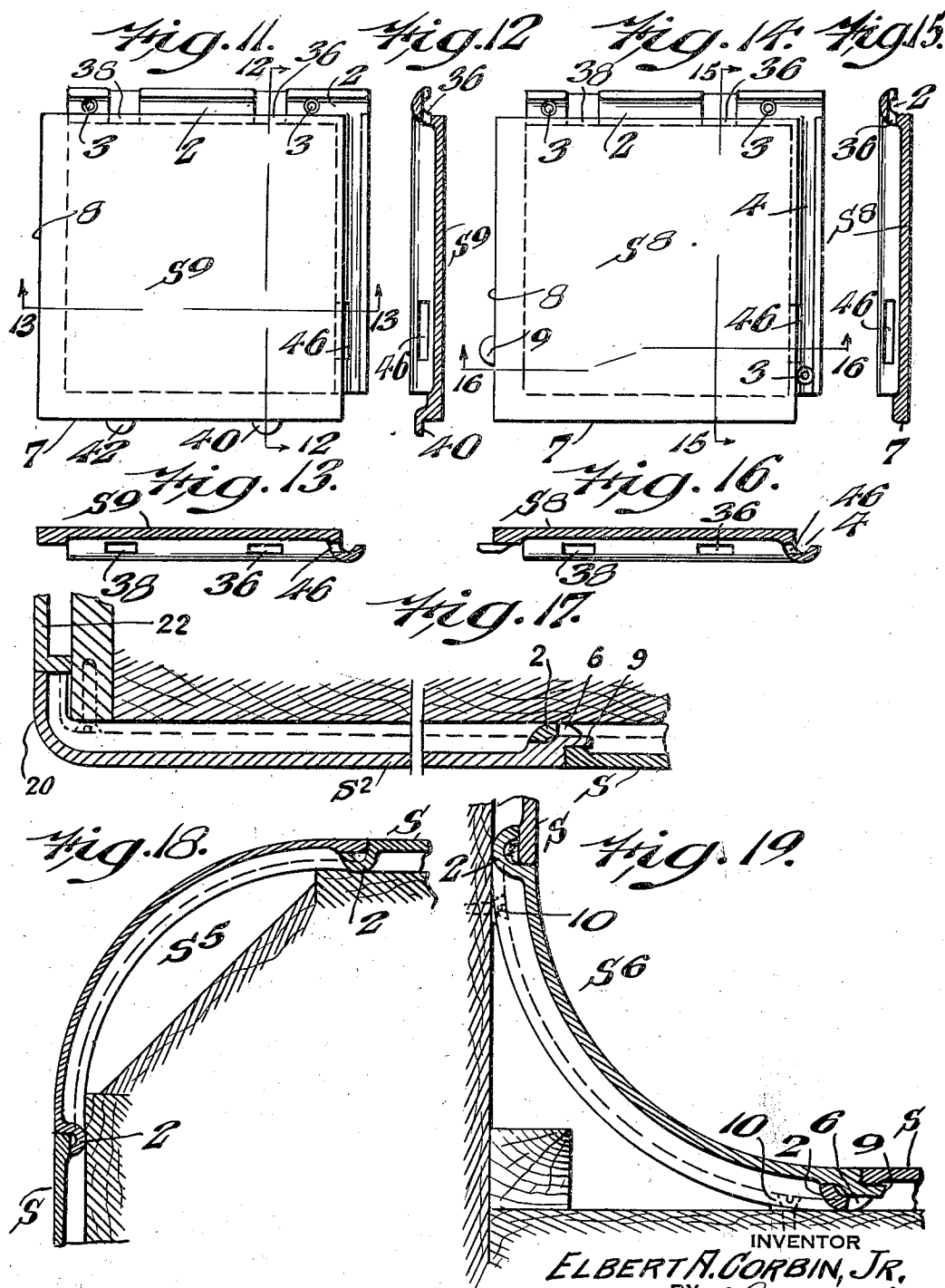
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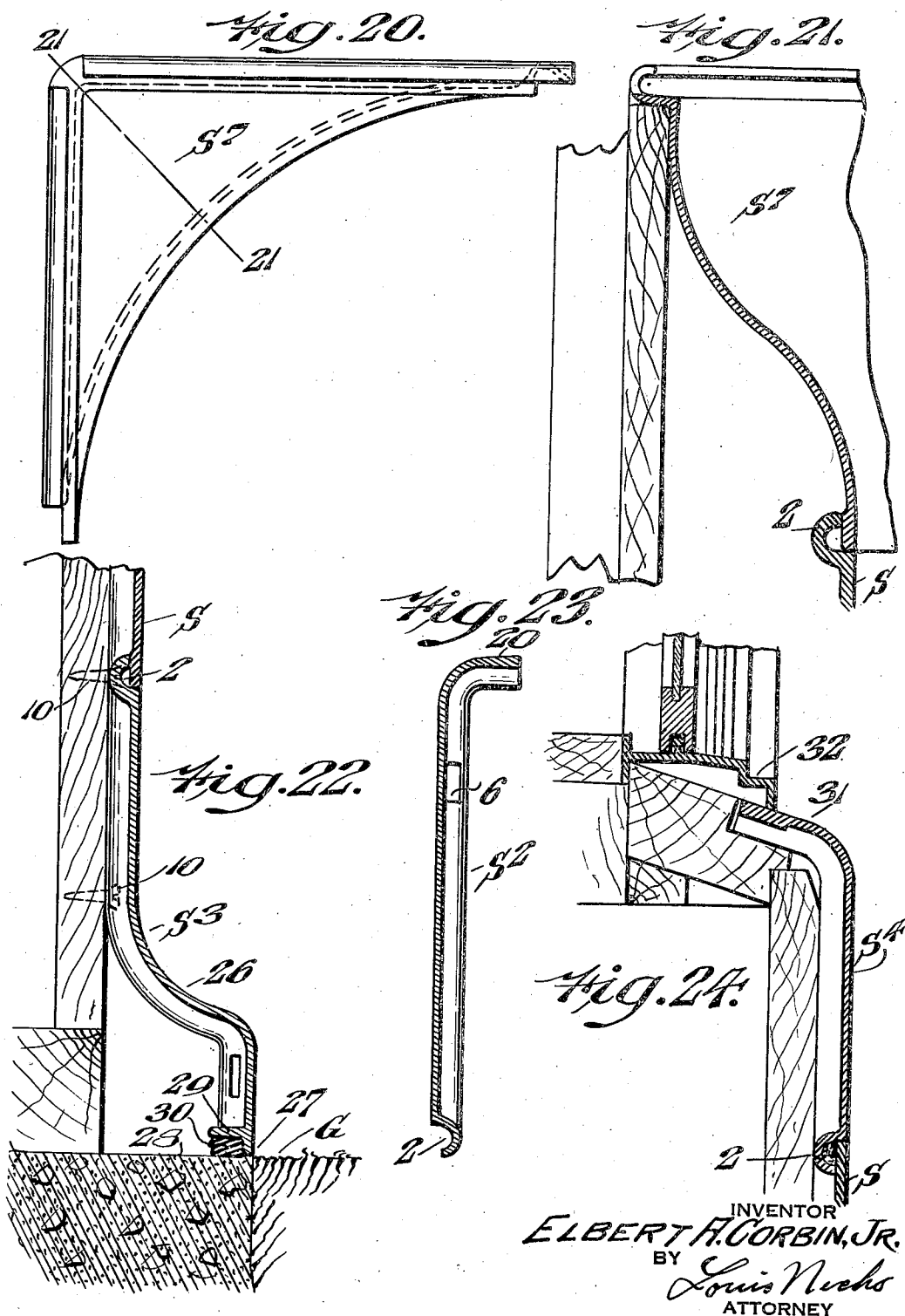
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UNITED STATES PATENT OFFICE

2,156,277

HOUSE CONSTRUCTION

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6 Claims. (Cl. 189—86)

My invention relates to a new and useful house construction and it relates more particularly to a novel form of metal shingle which is adapted to be secured to any desired support to form the exterior of a house.

Metal shingles for building the exterior of houses have heretofore been attempted, but all such shingles have been constructed so as to require a special form of support or framework. Thus, in the Lawlor Patent No. 2,061,281 and in my co-pending application No. 82,816 for instance, as well as in other prior patents, the shingle, as shown, is provided with inwardly projecting apertured lugs which are adapted to be secured by tie rods or the like to corresponding lugs or apertures in especially designed frames. I have found, by actual experience, that constructions of this type are all together impractical due to the extreme weight, extreme accuracy, coordination and extreme expense which make this construction prohibitive.

It is therefore the object of my invention to provide a novel shingle which is attachable to any desired support such as the wooden frame and sheathing of an ordinary frame house, or to wooden studding or stripping, without the necessity of any pre-fabricated frame structure or lugs or apertures on the shingle itself or on the supporting framework.

My invention further relates to a building shingle so arranged that it is manufactured in standard sizes and shapes to cover the entire exterior of the house and which is further so made as to be adequately secured at at least four points, and in which the securing means are completely invisible.

My invention further contemplates the provision of certain special forms of shingles which are adapted for use in certain positions adjacent door and window openings, corners, etc.

A further object of my invention is to provide a novel "stream-lined" building construction shingle, that is, one in which all sharp or angular corners are eliminated and replaced by graceful curves to form a slip-stream and to increase the attractiveness of the construction, and to this end my novel shingle adapts itself for manufacture in various curvilinear forms without in any way altering the manner in which the shingles are "laid", overlapped and secured and which may be applied to a wooden frame of angular construction.

My invention further relates to a shingle having its exterior enameled or otherwise coated with a protective and decorative covering and one

in which the overlapping joints are sealed with a plastic to produce an air tight construction.

In the accompanying drawings:

Fig. 1 represents a rear elevation of a shingle embodying my invention.

Fig. 2 represents a section on line 2—2 of Fig. 1.

Fig. 3 represents a section on line 3—3 of Fig. 1.

Fig. 4 represents, on a reduced scale, a front elevation of the shingles shown in Fig. 1 together with portions of surrounding shingles showing the manner of laying and securing the shingles in place.

Fig. 5 represents a section, on an enlarged scale, on line 5—5 of Fig. 4.

Fig. 6 represents a section, on an enlarged scale, on line 6—6 of Fig. 4.

Fig. 7 represents, on a reduced scale, a front elevation of a portion of the wall of a house showing a door and window and showing the position of the "key" shingles which are used to complete the construction.

Fig. 8 represents, on an enlarged scale, a section on line 8—8 of Fig. 7.

Fig. 9 represents, on an enlarged scale, a section on line 9—9 of Fig. 7.

Fig. 10 represents, on an enlarged scale, a section on line 10—10 of Fig. 7.

Fig. 11 represents a rear elevation of one of the "key" shingles used in completing the construction.

Fig. 12 represents a section on line 12—12 of Fig. 11.

Fig. 13 represents a section on line 13—13 of Fig. 11.

Fig. 14 represents a rear elevation of the second "key" shingle used in completing the construction.

Fig. 15 represents a section on line 15—15 of Fig. 14.

Fig. 16 represents a section on line 16—16 of Fig. 14.

Fig. 17 represents, on an enlarged scale, a section on line 17—17 of Fig. 7.

Figs. 18 and 19 represent transverse sections showing convex and concave shingles used in the formation of a round-cornered or stream-lined house construction.

Fig. 20 represents, partly in section and partly in elevation, an adapter shingle for connecting the rounded corners of a house construction to a square coping.

Fig. 21 represents a section on line 21—21 of Fig. 20.

Fig. 22 represents, on an enlarged scale, a section on line 22—22 of Fig. 7.

Fig. 23 represents a view of the shingle shown in Fig. 17 detached from the wall.

Fig. 24 represents, on an enlarged scale, a section on line 24—24 of Fig. 7.

Referring to the drawings in which like reference characters designate like parts and more particularly to Fig. 1, I have shown a shingle S of a standard form which is used to cover the entire exterior of the house except for certain particular places where auxiliary shingles of special shapes are employed and which will be described later. This type of shingle comprises a flat body portion 1 which may be rectangular or otherwise, and which is provided along its upper edge with a groove 2, having the holes 3, and along one vertical edge thereof with the groove 4 having one or more holes 5 and the slot 6. The bottom edge 7 and the other vertical edge 8 of the shingle S are plain except that the vertical edge 8 thereof is provided with the tongue 9. Each shingle S is secured to the sheathing, studding or other part of a frame house or the like by fastening means 10 passing through the holes 3 and 5, the number of which can be regulated according to the weight of the shingle and its size. Referring to Fig. 4 it will be seen that the horizontal groove 2 of any given shingle S is overlapped, after being filled with plastic, by the plain bottom edge 7 of the shingle next above it (or by the bottom edges of two adjacent shingles next above it when the point is broken). Also, it will be seen that the groove 4 in the shingle S is covered by the vertical edge 8 of the adjacent shingle on the right, (as viewed in Fig. 4) the tongue 9 of which engages the slot 6. Similarly, the bottom edge 7 of a shingle S overlaps the horizontal groove 2 in the upper edge of one or two shingles next below it also as shown in Fig. 4. Immediately abutting the door or window jambs I use a special form of shingle best seen in Figs. 17 and 23 and designated as S2. The shingle S2, except for having an inwardly deflected portion 20 adapted to abut against the door frame 22 (at its left hand end as viewed in Fig. 4), and except for omitting the tongue 9, is identical with the standard shingle S. In other words in order to begin a course of shingles at any point abutting on the opening of a door or window, the first shingle laid, transversely considered, would be the shingle S2 with the curved portion 20 thereof abutting against the door and with the opposite vertical edge thereof, having the groove 4, holes 3 and slot 6 ready to be overlapped by the plain vertical edge 8 of the next succeeding standard shingle S. The upper edge of each shingle S2 being provided with the groove 2 and holes 3 is overlapped by the plain bottom edge 7 of the shingle S2 next above it and so on until the top of the door or window is reached, whereupon other shingles are used as more fully hereinafter set forth.

Between the lowermost course of standard shingles S and the door abutting shingle S2, and the ground line G, I employ a course of shingles S3 which are best illustrated in Fig. 22 and which, except for being deflected as at 26 to improve the appearance of the exterior of the house, are identical in structure with the standard shingle S. The lower edges 27 of the shingles S3 rest upon the foundation 28 and are provided with the flange 29 between which and the foundation 28 is packed the plastic 30 to form an airtight joint. The tops of the shingle S3 are provided with grooves 2 and holes 3 which are overlapped

by the bottom edges 7 of the shingles S and S2 next above them.

In Fig. 24 I have shown a section on an enlarged scale of another type of shingle S4 which is used immediately above and below the upper and lower sills of a window or door opening, it being noted that the shingle S4 is identical in its manner of fastening with the standard shingles S except that the shingle S4 is provided with a curved portion 31 adapted to abut against the sill of a door or window opening.

If it is desired to construct a stream-lined or round-cornered house I utilize the convex and concave shingles S5 and S6 shown in Figs. 18 and 19 respectively which, except for their shape, are identical in their structure and manner of fastening with the standard shingle S. In order to connect the structure from a concave corner formed by the shingle S6 with the square coping of the house, I utilize the shingle S7 best illustrated in Figs. 20 and 21 which, except for its contour, is identical with the shingle S.

When a course of shingles extends around the house from one of the door jambs completely around to the opposite door jamb it is possible to complete the course by using left and right hand shingles S2 shown in Fig. 17 on either side of the jambs of the door with standard shingles S therebetween. Where, however, the course of shingles S is uninterrupted by any door or window opening, as shown in the middle and upper portions of Fig. 7, it becomes necessary to utilize a special kind of key shingles, which are best illustrated in Figs. 11 to 16. For instance, in the last course of standard shingles S which registers with the upper edge of the door D I interpose the shingle S8 which is exactly like the standard shingle S except for the provision of the slots 36 and 38 in the upper edge thereof which are adapted to receive the special lugs 40 and 42 on the complementary shingle S9 which, like the shingle S8 is also provided with the upper openings 36 and 38 for receiving the lugs 40 and 42 of the shingles S9 next above and so on until the bottom of another opening such as the window W is reached where the shingles S and S2 are again used. As will be seen from Fig. 7, a shingle S8 is interposed in the course of shingles S registering with the top of the door D and there is a continuous vertical column of shingles S9, the uppermost of which registers with the bottom edge of the window opening W. Similarly, in the course of shingles S corresponding with the top edge of the window W another key shingle S8 is inserted which receives the superimposed shingles S9 extending all the way up to the upper edge of the building. It will be noted that the key shingle S9 is provided with a slot 46 which is longer than the slot 6 in the standard shingle S to permit the entry into said slot 46 of the tongue 9 of an adjacent standard shingle S while the key shingle S9 is being slid downwardly into position between the juxtaposed spaced edges of two standard shingles S of an otherwise completed course. It will be noted that the key shingle S9 is secured by at least two screws passing through the openings 3 in its upper groove 2 and that the lower tongues 40 and 42 thereof engage the slots 36 and 38 in the key shingle of S8 or S9 next below it as the case may be.

It will thus be seen that the entire house is built from practically one form of shingle except for the small variations represented by the forms S2 to S9 inclusive which are changed only in order to accommodate particular requirements

such as the abutments against openings, at window sills, to provide round corners, to connect to the coping and to complete or lock any given course of standard shingles. The overlapping of the plain edges 7 and 8 of each shingle over the grooves 2 and 4 of any adjacent shingle with the plastic packing therebetween completely conceals the fastening screws 10 and produces a continuous surface broken only by the line showing at the junctions of the shingles. Furthermore, by my novel shingle it is possible to build not only a conventional house but a streamlined one with rounded corners from a relatively small number of the special shaped shingles S2 to S9, the rest of the shingles used being of the standard form thus greatly reducing the cost of material and reducing the number of special forms needed and greatly reducing the cost of labor since the process of laying the shingles, except for the few special forms needed around openings and corners, near the coping, or for locking the courses, is practically an automatic, mechanical one that needs no skill or attention, thereby dispensing with the need of highly skilled labor. Furthermore, by use of my novel shingle I am enabled to ship to any point, and merely by inspecting the plans of a proposed construction, all the necessary shingles suitably marked and measured to fit exactly thus eliminating all possibility of waste and confusion.

While I have shown and illustrated certain special forms of shingles which I believe to be sufficient for the construction of an average building, it is to be understood that my standard shingle S can be adapted by changing its shape or contour for use in connection with any special requirement arising in the building of special designs.

While in the drawings I have shown all my shingles as made of metal, it is to be understood that the same may be made of any other desired material which may be molded, cast, stamped, or otherwise manufactured such as compressed fiber board, wood, or any other desired substance, which would be weatherproof, afford the necessary strength and be capable of being suitably ornamented on the outside. Although I have not shown it in the drawings, I want it understood that the exterior of the shingle is covered with enamel or other washable and weatherproofing substance. I also wish to point out that the primary principle of my invention consists in the provision of a shingle having means along one edge thereof to receive a plastic and fastening devices and adapted to be concealed and sealed by the overlapping edge of an adjacent shingle. While I have shown the grooves 2 and 4 as on two adjacent edges and the overlapping edges 7 and 8 on the remaining sides of the shingle, it is to be understood that the relative positions of the grooves and overlapping edges, their size and their number may be varied without departing from the spirit and scope of my invention.

While I have shown my shingles applied to the exterior of a house, it is obvious that they may also be used to construct the interior walls and more particularly the walls of kitchens and bathrooms where completely washable and waterproof material is needed, my shingles constituting a stronger, more durable and less expensive substitute for the tile now used, and, with suitable decorations or color schemes, the shingles can be used as a substitute for wall paper or painting.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A building shingle comprising a body portion, a groove having a hole therein for receiving a fastening device along one side of said body portion and an edge extension on the opposite side of said body portion adapted to cover a groove of the next adjacent shingle, there being a slot in one of said grooves for receiving a tongue in the overlapping edge of an adjacent shingle.

2. A building shingle comprising a body portion, a groove having a hole therein for receiving a fastening device along one side of said body portion, an edge extension on the opposite side of said body portion adapted to cover a groove of the next adjacent shingle and a tongue formed on said edge extension.

3. A building shingle comprising a body portion having grooves formed on two adjacent sides thereof, there being holes through said grooves for receiving fastening devices and a slot in each of said grooves for receiving the locking tongues of adjacent shingles, end extensions for overlapping the grooves of adjacent shingles and a locking tongue on one of said extensions.

4. A building shingle comprising a body portion, a grooved lug having a hole therein for receiving a fastening device along one side of said body portion, an edge extension on the opposite side of said body portion adapted to cover a groove of the next adjacent shingle and a tongue formed on said edge extension.

5. A building shingle comprising a body portion, grooved lugs having holes therein for receiving a fastening device along one side of said body portion, an edge extension on the opposite side of said body portion adapted to cover a groove of the next adjacent shingle and a tongue formed on said edge extension.

6. A building shingle comprising a body portion, a groove having a hole therein for receiving a fastening device along one side of said body portion, an edge extension on the opposite side of said body portion adapted to cover a groove of the next adjacent shingle and a tongue formed on said edge extension, one side of said shingle being curved at an angle to the plane of said body portion.

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