Jan. 1, 1929. 1,697,519

W. W. WEAVER

SHINGLE

Filed Oct. 23, 1925

FIG. I.

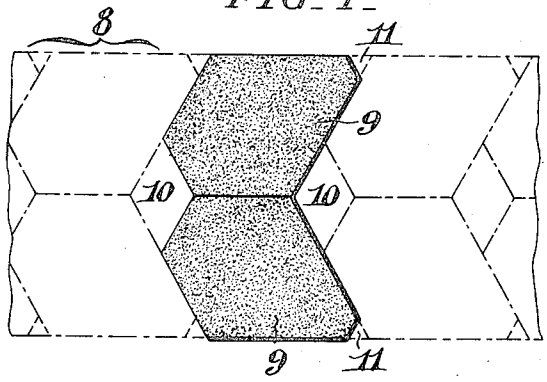


FIG. II.

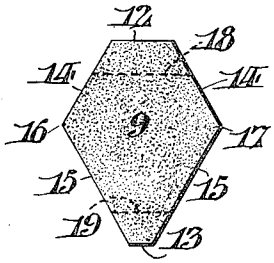


FIG. III.

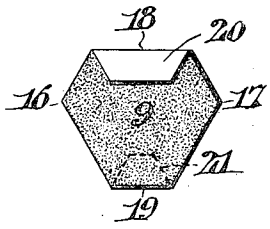


FIG. IV.

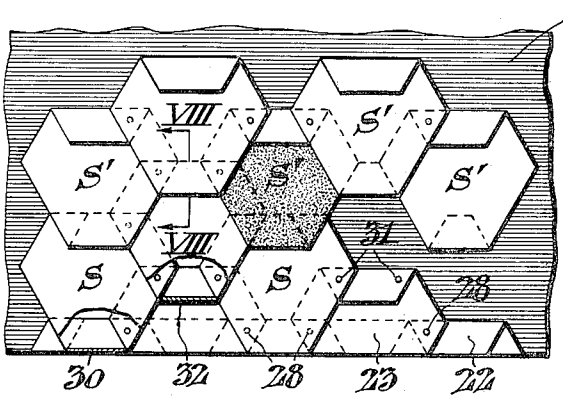


FIG. VI.

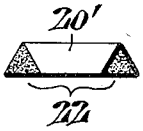


FIG. VII.

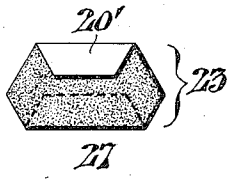


FIG. V.

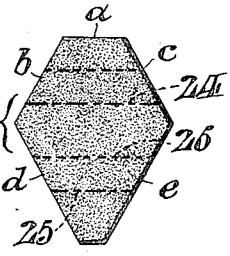
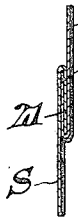


FIG. VIII.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SHINGLE.

Application filed October 23, 1925. Serial No. 64,445.

This invention relates to shingles for covering roofs or other surfaces, and it has more particular reference to those types made of sheet material treated with impregnating substance to render the same waterproof.

Primarily, the present invention has for an object the production of an interlocking unit embodying unique features for securing the superposed corners of successively laid rows of such shingles.

Another object is to provide an interlocking shingle capable of being laid without the use of wire or flat band fasteners, such as are now commonly employed.

A further object is to obtain a locked butt-joint proof against the entry of wind, rain or other atmospheric elements tending to defeat the purpose for which the shingles are intended, and also conducing to deteriorate the surface covering.

Other objects associated with my invention are the production of a surface covering unit which, when laid, assures an artistic finish of regular hexagonal pattern; to enhance the shadow lines at the shingle butts; and to increase the relative overlap of the laid shingle units; thereby affording greater protection to the surfaces covered, as well as increasing the general durability, with corresponding counteraction of deteriorative effects incident to atmospheric exposure.

With the foregoing general objects in view, this invention essentially consists in the matters hereinafter fully described, typically illustrated by the accompanying sheet of explanatory drawings, and tersely defined with respect to subject-matter—as well as scope—in the appended claim.

In the drawings:—

Fig. I, is a view in plan illustrative of the manner in which my novel interlocking shingles are cut from standard width sheet material.

Fig. II, is a face view of a detached shingle unit before being folded, and indicating the "creases" by dotted lines.

Fig. III, is a similar view of a shingle unit after being folded, or ready for use.

Fig. IV, is a fragmentary top plan view of a surface covered with my novel type of interlocking shingles.

Fig. V, is a plan view illustrative of the manner in which two "starter" elements are made from shingle units of the configuration illustrated in the preceding views.

Fig. VI, is a detail view of the one "starter" element folded ready for use.

Fig. VII, is a similar view of the other "starter" element; and,

Fig. VIII, is an enlarged sectional detail, taken as indicated by the arrowed lines VIII—VIII in Fig. IV.

The embodiment of this invention illustrated has been selected, from other possible forms, as the one which is believed to exhibit the same in its most convenient, compact and effective form; while corresponding parts are designated by the same reference numerals in all the views.

Referring more in detail to the several views, and in carrying out this invention, I conveniently—though not essentially—make use of a length of sheet material 8, Fig. I, rendered flexible and weatherproof in accordance with prevailing practice. This length of roofing material 8 is of suitable width to compactly provide, when transversely severed at regular intervals, two adjoining shingle blanks 9, 9, with an intervening diamond shaped section 10 and triangular tip portions 11, 11. In effect the section 10 and portions 11, 11, might be considered waste; but in accordance with the embodiment of this invention illustrated, and making use of a thirty-six-inch wide web of roofing material 8, I provide eight-inch diamond sections 10, that can be conveniently employed as distinctive roofing of the three-ply type. Consequently, the only real waste involved, as a result of the foregoing manner of severing shingle units, is the comparatively small (approximately three-inch) equi-lateral triangular portions 11, 11.

Individually each shingle blank 9 is of irregular hexagonal configuration, as best understood from Figs. II and III; whereas, any two contiguous edges thereof define or enclose an angle of one-hundred-twenty degrees. Specifically, the blank 9 is bounded by upper and lower parallel edges 12, 13, respectively, of unequal length; and opposed angular sides constituted by upper and lower parallel edges 14, 15, respectively, of unequal length, or, in other words, the shingle blank 9 may be tersely described as an irregular parallel-sided equi-angular hexagon, em-

bodying upper and lower trapeziform portions with respect to an imaginary line connecting the angular points 16, 17.

Shingle blanks 9, of the configuration above set forth, are transversely scored or creased at 18, 19 to provide retrovertible portions parallel to the upper and lower edges 12, 13; the former of which, when folded, constitutes an overlap 20, and the latter an underlap 21; the respective purposes whereof will hereinafter be fully explained. When the respective retroversions 20, 21, just referred to, are effected the finished shingle is, as portrayed by Fig. III, ready for use, as later on set forth.

In connection with shingles of the typified character I employ a plurality of "starters" 22, 23, as shown, respectively, by Figs. VI and VII, both of which are conveniently severed from shingle blanks of the configuration illustrated in Figs. II and V. Referring firstly to the form of starter designated 22, it will be seen that it is conveniently cut along a line 24—Fig. V—from the upper portion of a creased blank 9 with the overlap 20′ folded as previously described. Somewhat similarly the starter 23 is severed along a line 25 from the major portion of a creased blank 9, and it is transversely scored at 26 to provide an underlap 27, with an overlap 20′, as aforesaid. In connection with these starters 22, 23 it is to be noted that the blanks therefor, as best appreciated from Fig. V, are respectively bounded by the lines *a*, *b*, 24, *c*; and *a*, *b*, *d*, 25, *e*, *c*: whereas, the respective folded starters are trapeziform and irregular hexagonal in configuration.

Shingles of the type above described are laid in the following manner:—

Starters 22, 23 are alternately attached, by nails 28, to a straight or longitudinal edge of the roof or other surface boarding 29, with the underlap 27 of the starter 23 aligning with the overlap 20′ of a starter 22, as clearly illustrated at the lower right-hand corner of Fig. IV. When the aforesaid nails 28 are driven, as indicated, there are afforded, what may be conveniently termed, pockets 30—vide, left-hand lower corner of Fig. IV—in the starters 22 of a configuration to snugly accommodate the underlaps 21 of the first row of spaced shingles S. These shingles S, it will be observed are self-aligning incident to the interlocking connection just set forth, as well as the registration of the angular points 16, 17 with the upper edges of the starters 23.

Nails 31 are now driven through the overlapping parts of the shingles S with the starters 23 which result in the formation of pockets 32 in said starters. The second or succeeding row of shingles S′ is now laid by inserting the underlap 21, of each consecutive shingle, into the aligned pockets 32 of the starters 23 and applying nails 31 as before set forth; it being observable that the angular points of the shingles S′ register with the upper edge of the previously laid shingles S. Succeeding rows of shingles S′ are similarly laid in staggered relation with respect to one another, as shown, and in accordance with known practice, but it is to be particularly noted that when shingles in accordance with this invention are applied to a surface the result is very artistic and of regular hexagonal pattern, as evidenced by the heavily stippled portion of Fig. IV.

From the foregoing it will be readily understood that the individual shingles S, S′, are securely interlocked by their underlaps 21 and overlaps 20—Fig. VIII—with a secure and novel butt-connection; or, in other words, each butt interlock is productive of a very pronounced shadow line due to the double interlaps of four thicknesses of roofing material. Furthermore, it is equally apparent, my novel manner of interlocking successive shingles effectively prevents the entrance of wind, rain and so forth between the surface covering and subjacent roof boards or the like.

The foregoing description is believed to clearly establish and justify all the objects set forth in the statement of invention; and, while it is deemed preferable to employ the particular embodiment illustrated, changes in the shape and relative proportions may, obviously, be effected without departing from the scope of said invention or sacrificing any of its advantages.

Having thus described my invention, I claim:—

A surface covering comprising overlapping flexible shingles arranged in rows over a foundation, a shingle in one row having at its top an outwardly and downwardly turned tab, superposed shingles overlying the sides of the first mentioned shingle and the ends of the tab and secured to the foundation by fasteners passing through the ends of the tab whereby the tab is firmly held down and a pocket formed between the tab and the body of the first mentioned shingle, and a superposed shingle having an inwardly and upwardly turned tab engaging within the said pocket.

In testimony whereof, I have hereunto signed my name at Maurer, N. J., this seventeenth day of October, 1925.

WAYNE W. WEAVER.