Nov. 4, 1924. 1,513,800

F. R. BRYDLE

INTERLOCKING SHINGLE

Filed Dec. 6, 1922

Fig. 1.

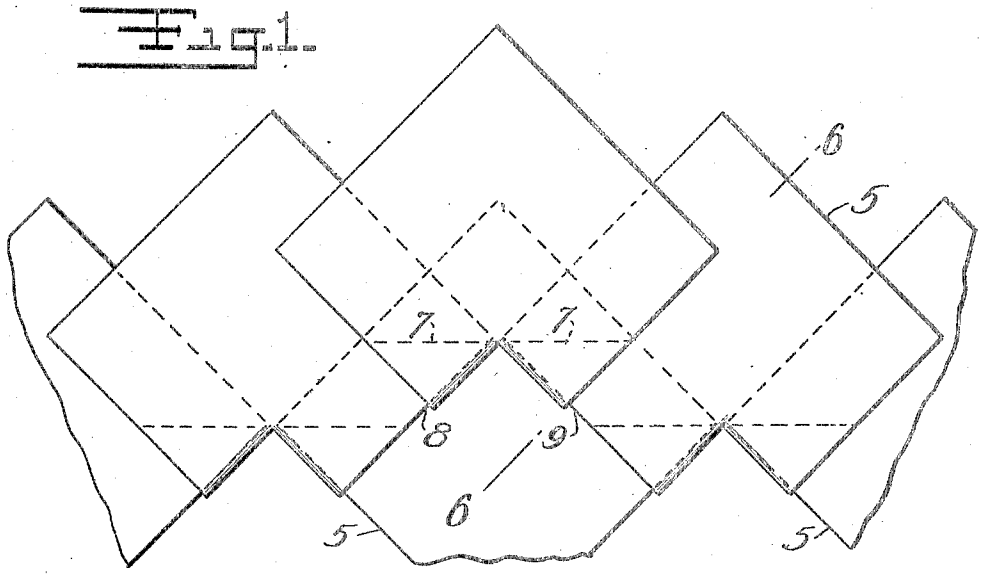


Fig. 2.

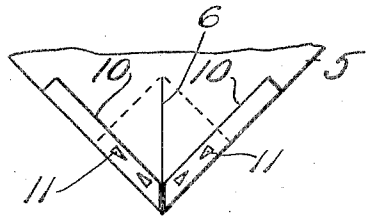


Fig. 5.

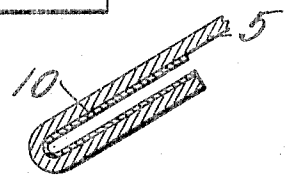


Fig. 3.

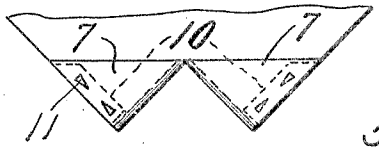


Fig. 6.

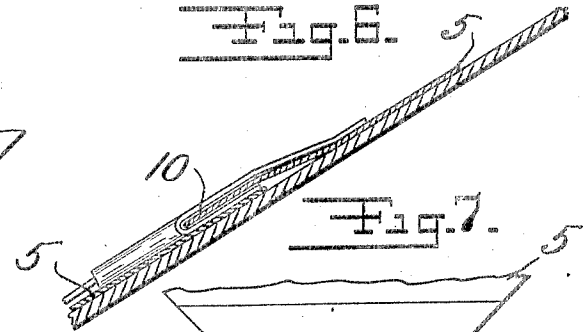


Fig. 4.

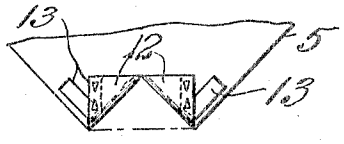
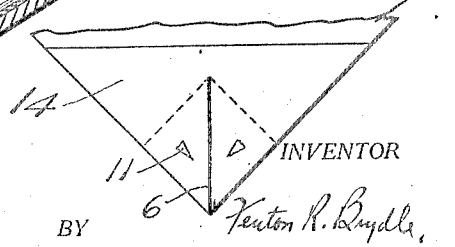


Fig. 7.



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UNITED STATES PATENT OFFICE.

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INTERLOCKING SHINGLE.

Application filed December 6, 1922. Serial No. 605,158.

To all whom it may concern:

Be it known that I, FENTON R. BRYDLE, a citizen of the United States, residing at Jamaica, in the county of Queens and State of New York, have invented certain new and useful Improvements in Interlocking Shingles, of which the following is a specification.

This invention relates to weather-proof building material of the interlocking shingle type.

Shingles made of suitable relatively flexible waterproof material and formed to be laid in such manner that the lower extremities of the exposed portions are each provided with a single anchoring flap or tab, are well known and have gone into extensive use. Although such shingles are widely used they are open to the objection that the tabs, particularly when softened by summer heat, are easily bent back on themselves or torn while being forced into position partly underneath previously laid shingles and are not stiff enough to retain their hold and satisfactorily perform their anchoring function. In other types in which dependence is placed on a wire affixed to each tab and having laterally extended end portions arranged to be inserted beneath the edges of previously laid shingles, the small areas of contact of the wire sections with the laterally disposed anchoring shingles does not securely hold the overlying shingle in flat position, and also tends to cut and tear the anchoring shingles under the action of wind and weather and the tendency to warp and curl which is inherent in the shingles themselves.

An object of the present invention is to provide a shingle construction of the interlocking type which will be free from the objections referred to and in which the exposed end of the shingle is securely anchored in flat position to the underlying shingles.

The invention includes the use of metal reinforcing members carried by the underturned tabs and formed to engage and grip both the upper and lower surfaces of previously laid shingles to provide a secure and effective anchorage. The reinforcing members are preferably formed of relatively rigid sheet metal and are attached to the upper surface of the tabs and bent back to engage the under surface of the overlying main body portion of the shingle to provide a clip or holder in which to receive corresponding portions of the underlying shingles and thereby produce an interlocking action between the under and overlying shingles that securely anchors the overlying shingles in place.

Another feature of the invention resides in the provision of two anchoring tabs, instead of one, formed at the lowermost corner of the shingle. This construction provides for the insertion of the entire area of each tab beneath the flanking diagonal margin of a previously laid shingle to obtain a correspondingly increased anchoring engagement therewith. The two tabs are formed to extend diagonally away from each other in upward and outward directions and are supplied with the reinforcing clips referred to so that they produce an exceedingly effective holding engagement between the two layers of shingle units.

Other features of the invention will be hereinafter referred to.

In the drawings, in which a preferred embodiment of the invention has been selected for illustration,

Figure 1 is a plan view of a portion of a shingled surface showing shingle units embodying the invention.

Figure 2 is a view of a corner portion of a shingle slit to form two tab member blanks each of which is provided with a reinforcing clip.

Figure 3 is a view similar to Figure 2 showing the tab and clip members bent back into operative position.

Figure 4 is a view similar to Figure 3 showing a modified form of tab and clip.

Figure 5 is a sectional view on an enlarged scale showing the construction of a reinforced tab forming part of the invention.

Figure 6 is a detail view in cross-section taken on the line 6—6 of Figure 1.

Figure 7 is a view similar to Figure 2 showing another form of reinforcement for a corner tab of the shingle.

Referring to the drawings for a more de-

tailed description of the invention a shingle 5 is shown which may be formed of asphaltum-treated fibrous matter or other material suitable for the purpose. The shingles shown are intended to be applied to the desired surface in such manner that the side edges of the weather-exposed portions of the shingles take downwardly converging positions and form diagonals with relation to the horizontal. The lowermost corner or extremity of each shingle is slit as at 6 and then turned under and folded back to form a pair of tabs or tongues 7 adapted to be inserted for their full length beneath the flanking edges of the two juxtaposed underlying shingles 8 and 9 as indicated in Figure 1 of the drawing.

Experience has shown that relatively flexible anchoring tabs such as are formed by turning back on themselves corner extremities of asphalt shingles, tend to bend and fold in the act of pushing them to place beneath the edges of previously laid shingles It has also been found that the line of attachment between the underturned tab and the main body portion of the shingle is not strong enough to invariably resist the strain of pushing the tabs to anchoring position or the lifting force exerted on the overlying shingle through the action of wind blowing beneath the edges of the shingles beneath, with the result that the lower extremities of the shingles are occasionally torn from their connection to the anchoring tabs.

I overcome these objections by the use of a reinforcing clip member 10 which is formed of sheet metal and attached in any convenient manner, as by means of tongues 11 formed in the body of the strip, to one surface of each of the tab members 7 as in Figure 2 of the drawing. The tab members 7 are then turned back as in Figure 3 which causes the metal strips 10 to be folded back on themselves as shown in Figures 3 and 5 to provide a clip or holder whose oppositely disposed members are spaced apart by the thickness of a shingle.

In practice, the tab members 7 are pushed upwardly and for their full length beneath the edges of two adjacent shingles as 8 and 9 in Figure 1 of the drawings. The pushing of the tabs into place beneath the shingles 8 and 9 is greatly facilitated by reason of the reinforcing members 10 whose stiffness prevents the buckling or bending of the tabs. When the tabs are in position beneath the shingles 8 and 9 it will be seen that the lower arm of the clip engages the lower surface of the shingle while the upper arm engages the upper surface of the lower shingles and rests against the lower surface of the over-lying shingle by which the tab and clip are carried. The clip member thus holds or clamps the anchoring shingles and holds the overlying shingle in a stable, flat position. It will be clear that additional fastening means may be employed as the use of nails in protected locations for securely attaching the shingles in place.

In Figure 4 of the drawings a modified form of the invention is shown in which the tab members 12 have a somewhat different formation than in Figure 3 so that the side edges of the tabs and the lower arms of the correspondingly modified clip 13 take positions parallel to the vertical axis of the shingle so as to facilitate the pushing of the shingle along its vertical axis into position.

In Figure 7 is shown a construction in which the reinforcing member 14 extends to the lateral edges of the tab and rewardly along the under surface of the shingle beyond the line of bend, thereby providing an extremely effective and secure anchoring device.

It will be seen that I have thus provided a shingle construction having double interlocking or reinforcing tabs provided with reinforcing clips extending longitudinally of the tabs and formed to engage both surfaces of underlying shingles, and the whole area of the anchoring tabs being effective to engage the lower surface of underlying shingles to securely hold the overlying shingle in flat position.

What I claim is:—

1. In a shingle of the interlocking type, a lower corner of the shingle being slit to form a pair of tab members, said tab members being bent upwardly and outwardly from the slit for insertion beneath previously laid shingles, and reinforcing members carried by the tabs for engagement with both the upper and lower surfaces of the previously laid shingles.

2. In a shingle of the interlocking type, a margin of the shingle being formed into underturned tab members for anchoring engagement with the under surface of previously laid shingles, and sheet metal reinforcing members attached to the upper surface of the tab members.

3. In a shingle of the interlocking type, a margin of the shingle being formed into underturned tab members for anchoring engagement with the under surface of previously-laid shingles, and sheet metal reinforcing members attached to the upper surface of the tab members and extending along the tab members in the direction of movement of the tab members when pushed to anchoring position.

4. In a shingle of the interlocking type, a corner of the shingle being formed into a pair of underturned tab members for anchoring engagement with the under surface of previously-laid shingles, and sheet metal reinforcing members attached to the upper surface of the tabs and bent back along the under surface of the shingle to receive the

underlying shingles and engage both the upper and lower surfaces thereof.

5. In a shingle of the interlocking type, a corner of the shingle being formed into a pair of underturned tab members for anchoring engagement with the under surface of previously-laid shingles, and sheet metal reinforcing members attached to the upper surface of the tab members, said reinforcing members having a U-shaped formation to engage both the upper and lower surfaces of the previously-laid shingles.

FENTON R. BRYDLE.