Oct. 28, 1941. E. S. FOOKS, JR., ET AL 2,260,446

SHINGLE FASTENING DEVICE

Filed May 24, 1940

Fig. 1.

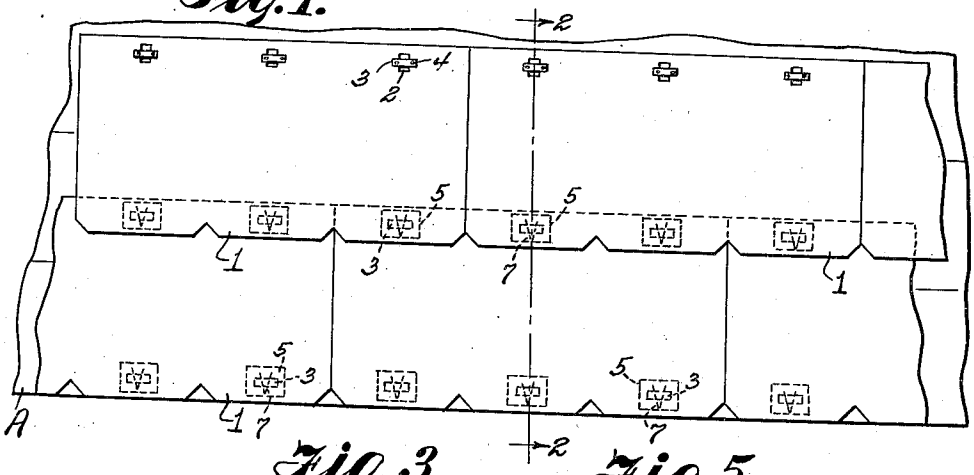
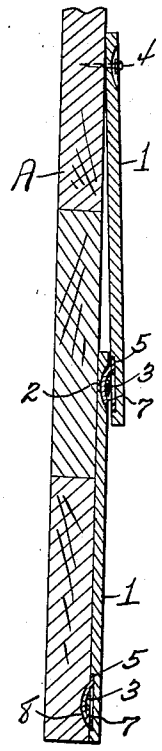


Fig. 3.

Fig. 5.

Fig. 2.



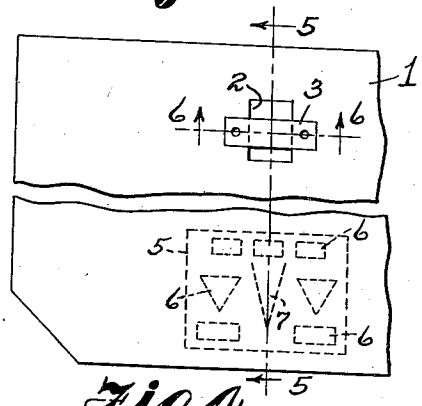
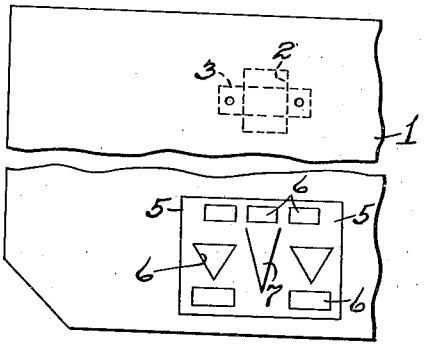


Fig. 4.



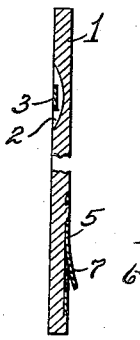


Fig. 6.

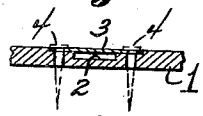


Fig. 7.

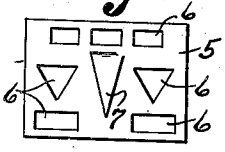


Fig. 8.

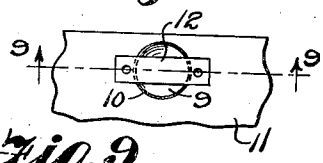
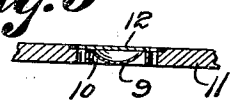


Fig. 9



Ernest S. Fooks, Jr.
Walter F. Koontz
INVENTORS

BY Victor J. Evans & Co.
ATTORNEYS

WITNESS

Patented Oct. 28, 1941 2,260,446

UNITED STATES PATENT OFFICE

2,260,446

SHINGLE FASTENING DEVICE

Ernest S. Fooks, Jr., and Walter Frank Koontz,
Uniontown, Pa.

Application May 24, 1940, Serial No. 337,086

5 Claims. (Cl. 108—33)

This invention relates to fastening devices for both rigid and flexible type shingles, and its general object is to provide devices that include companion interlocking tongue and keeper means which make it possible to apply or lay shingles of the rigid type without breakage thereof, and the flexible type without curling, due to wind or sun heat, in that the shingles are securely fastened at both the upper and lower portions thereof, and without exposing any of the devices to weather elements, thus it will be seen that the shingles are held weather-tight by our devices, against removal or displacement and unsightly rust stains, as well as exposed nail heads, that are brought about by applying shingles in the usual manner, are eliminated.

A further object is to provide fastening devices which allows shingles to be properly aligned, spaced and fastened in the usual overlapped courses, in an easy and expeditious manner and the devices are simple in construction, inexpensive to manufacture, and extremely efficient in use and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a plan view illustrating the manner of applying and fastening shingles by our devices in overlapped courses to the sheathing of a wall of a building.

Figure 2 is a sectional view taken approximately on line 2—2 of Figure 1.

Figure 3 is a fragmentary front view of a shingle in applied position.

Figure 4 is a fragmentary rear view thereof.

Figure 5 is a sectional view taken approximately on line 5—5 of Figure 3, looking in the direction of the arrows.

Figure 6 is a sectional view taken approximately on line 6—6 of Figure 3, looking in the direction of the arrows.

Figure 7 is a detail view of the tongue member.

Figure 8 is a fragmentary view of a modified form of keeper member.

Figure 9 is a sectional view taken approximately on line 9—9 of Figure 8, looking in the direction of the arrows.

Referring to the drawing in detail, it will be noted that while we have illustrated our fastening devices as being used for applying or laying siding shingles, or in other words the type used on side walls of a building, it will be obvious that the devices can be used for lap siding and roofing shingles, and the shingles are shown as being of rectangular formation to be laid in end to end engagement, as clearly shown in Figure 1.

The shingles which are indicated by the reference numeral 1 are shown as being provided with triangular shaped notches in the lower edges thereof, and arranged in the outer faces of the form of Figures 1 to 7 inclusive, adjacent the upper edges thereof are rectangular depressions or recesses 2 that are concaved from their upper to their lower edges, as best shown in Figure 5, to receive and act as guides for locking tongues, in a manner which will be later described. Each shingle is preferably provided with three of the recesses 2 that are equally spaced and aligned with each other, with one recess disposed centrally of the ends of the shingle and the other adjacent the outer ends thereof.

A keeper strip 3 is provided for each recess and is adapted for disposal in bridging relation thereto across its transverse center to provide keeper means for one of the tongues. The strip 3 is preferably countersunk in the shingle as best shown in Figure 6, which likewise illustrates that the strip is of a length to extend a considerable distance beyond the side edges of the recess and has openings adjacent its ends to receive nails 4 or other like securing means for not only securing the strip in place but for fixing the shingle to the sheathing A of the side wall, as clearly shown in Figure 2.

Fixed to and embedded within the shingle along and adjacent to the lower longitudinal edge thereof, to prevent any possibility of displacement or removal therefrom are locking tongue plates or clips 5, there being a plate 5 for each keeper means and being aligned therewith. The plates 5 are shown as being flush with the inner face of the shingle and are permanently fixed thereto in the form shown, by being molded therein, the plates being provided with holes 6 for receiving the shingle material during the molding process. However, the plates 5 may be fixed to the shingles by any other well known suitable means, it depending of course upon the material from which the

shingle is made, but regardless of the material, it will be understood that the plates are held against removal or displacement. Fixed to and projecting from each of the plates **5** is an elongated triangular shaped locking tongue **7** that is outwardly flared to its apex end, from the shingle for disposal in depending relation beyond the inner face thereof, as best shown in Figure 5. While the plates **5** are shown as being of relatively wide rectangular formation and the tongues are of triangular shape, both may be of any other suitable shape and of course can be made in various sizes.

From the above description and the disclosure in the drawing, and particularly from Figures 1 and 2, it is believed that the manner of laying and fastening the shingles by our devices will be obvious, but it might be mentioned that the initial course is laid by first providing depressions or recesses **8** in the sheathing A, as shown in Figure 2. The strips **3** are then nailed across the recesses **8** to provide keeper means for receiving the tongues **7** of the shingles of the first course, the tongues being inserted in the recesses and are guided by the curvature thereof to be automatically hooked about the rear faces of the strips. The size of the tongues relative to that of the recesses allow some lateral or tilting movement of the shingles for adjustment thereof before nailing the same in place, so that the shingles can be properly aligned, as will be apparent. Then the strips **3** are nailed across the recesses **2** of the shingles, to provide keeper means for the tongues of the second course, the nails being of a length to extend through the shingles and into the sheathing for securing the first course in face to face engagement with the sheathing, as shown in Figure 2. The second course is laid by inserting the tongues of the shingles thereof in the keeper means provided on the first course, and thence nailing strips across the recesses of the second course to provide keeper means for the third course, and to secure the second course to the sheathing. The subsequent courses are laid in the same manner, as will be apparent.

The modified form of keeper means of Figures 8 and 9 includes a concavo-convex circular cup **9** provided with a marginal flange **10** formed on the periphery thereof to fit within a round hole in the shingle **11**, the flange being of the same width as the thickness of the shingle, as shown in Figure 9, and sets up a frictional engagement therewith. However, the cup is further held in the hole by a keeper strip **12** identical with the strip **3**, in that the strip **12** is provided with openings at the ends thereof for receiving nails or other like securing means, for securing the strip in place, as well as the upper edge portion of the shingle **11** to the wall. The keeper means of Figures 8 and 9 are arranged with respect to the shingle in exactly the same manner as the keeper means of the other form, and it will be obvious that the strips **12** receive the locking tongues of the shingle for securing the lower edge portion thereof in place.

It might be further mentioned that staples can be used in place of the nails **4** and strips **3** and **12**, with substantially the same efficiency, and in the event our fastening devices are used with shingles made from concrete or like material, it will be apparent that holes are provided for the nails or staples, but of course such holes are unnecessary when the devices are used with asphalt or other flexible type shingles.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What we claim is:

1. Fastening devices for shingles, comprising plates fixedly embedded in each shingle adjacent one edge thereof and in spaced alignment with each other, a locking tongue struck from each plate and outwardly flared from the rear face of the shingle, the tongues being disposed at right angles to said edge and having their free ends directed toward said edge, keeper means including strips, means for securing the strips on the front face of each shingle adjacent to the opposite edge thereof and for securing the shingle in place, and said strips adapted to receive the tongues of a superjacent shingle for locking the shingles to each other in overlapped relation.

2. Fastening devices for shingles, comprising plates fixedly embedded in each shingle adjacent one edge thereof and in spaced alignment with each other, a locking tongue struck from each plate and outwardly flared from the rear face of the shingle, the tongues being disposed at right angles to said edge and having their free ends directed toward said edge, each shingle having concaved depressions therein on the front face thereof adjacent to its opposite edge, keeper strips for bridging said depressions, means for securing the strips to the shingles and the latter in place, and said depressions adapted to receive the tongues of a superjacent shingle for disposal of the tongues in engagement with the inner faces of the strips for locking the shingles to each other in overlapped relation.

3. Fastening devices for molded shingles, comprising plates embedded in each shingle adjacent one edge thereof in spaced alignment with each other, said plates having holes therein with the shingle material within the holes for fixing the plates to the shingles, a substantially triangular shaped locking tongue struck from each plate and outwardly flared from the rear face of the shingle, said tongues being disposed at right angles to said edge and having their apex ends directed toward said edge, each shingle having concaved depressions therein on the front face thereof adjacent to its opposite edge, keeper strips for bridging said depressions, means for disposal through the strips and the shingle for securing the strips to the shingle and the latter in place, and said depressions adapted to receive the tongues of a superjacent shingle for disposal of the tongues in engagement with the rear faces of the strips for locking the shingles to each other in overlapped relation.

4. Fastening devices for shingles, comprising plates fixedly embedded in each shingle adjacent one edge thereof and in spaced relation with each other, a locking tongue struck from each plate and outwardly flared from the rear face of the shingle, the tongues being disposed at right angles to said edge and having their free ends directed toward said edge, each shingle having openings therein adjacent to its opposite edge, concavo-convex cups including marginal flanges frictionally mounted in the openings, keeper strips for bridging said cups, means for securing the strips to the shingles and the latter in place, and said cups adapted to receive the

tongues of a superjacent shingle for disposal of the tongues in engagement with the rear faces of the strips for locking the shingles to each other in overlapped relation.

5. Fastening devices for shingles comprising plates fixed to each shingle adjacent one edge thereof, a substantially triangular shaped tongue struck from each plate and outwardly flared from one face of the shingle, said tongue being disposed at right angles to said edge and having its apex directed toward said edge, keeper means, means for securing the shingle in place and the keeper means on the opposite face of the shingle and adjacent to the opposite edge thereof, and said keeper means adapted to receive the tongues of a superjacent shingle for locking the shingles to each other in overlapped relation.

ERNEST S. FOOKS, JR.
W. FRANK KOONTZ.