Sept. 16, 1941. C. J. DEXTER 2,256,313

ROOFING ANCHOR STRIP

Filed Feb. 8, 1940

FIG. 1

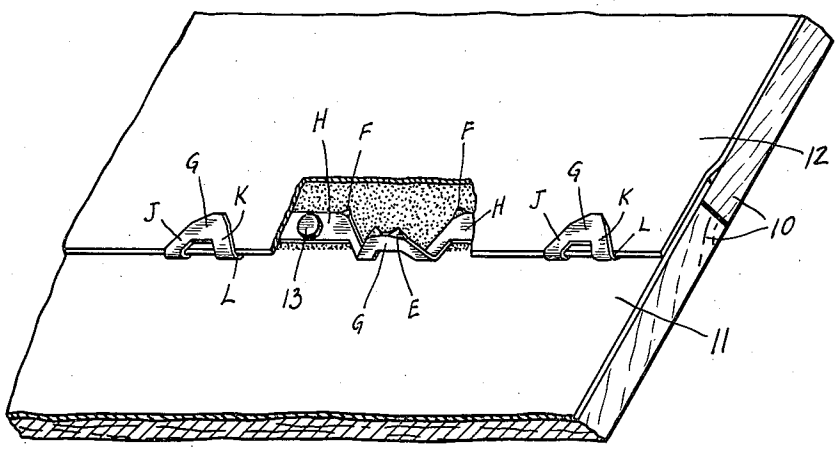



FIG. 2

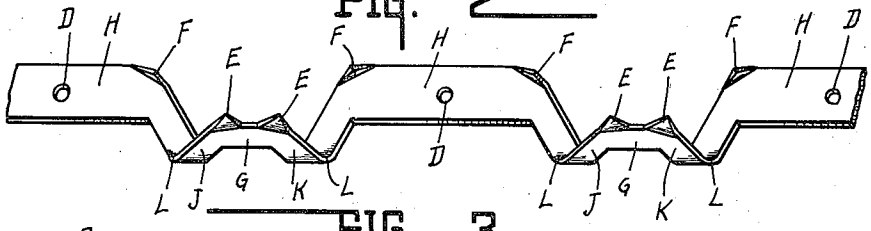
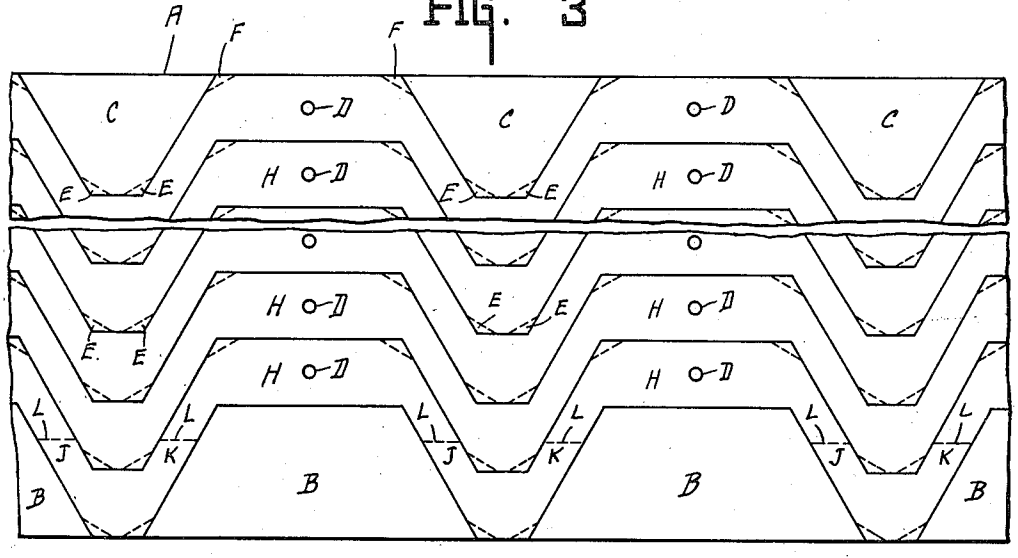



FIG. 3




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## ROOFING ANCHOR STRIP

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Application February 8, 1940, Serial No. 317,803

2 Claims. (Cl. 108—33)

This invention relates to a roofing anchorage and is an improvement upon that shown in Patent Re. 20,470, dated August 17, 1937, a reissue of Patent No. 1,990,776, dated February 12, 1935 and Hunt No. 2,176,344.

Briefly summarized, the chief object of this invention is to provide an anchorage for strip and shingle roofing, generally of the composition type, which provides a more positive roofing anchorage, requires less material, which can be fabricated as cheaply as, and which can be more easily applied than the anchorage set forth in said patents, as will appear more fully hereinafter.

The chief feature of the invention consists in the formation of such an anchorage in the form of a series of longitudinally arranged sequentially connected U or V-like portions, successive portions being oppositely directed, which sequential arrangement can be folded into parallelism longitudinally of the anchorage with the roofing therebetween, said portions at the opposite sides of the strip having similarly directed barbs or the like so that when the portions are positioned parallel to each other the several barbs of adjacent portions are oppositely directed and towards each other and penetrate the roofing, the base or vertex of one portion being positioned between the bases or vertices of adjacent sequentially connected portions, as will appear more fully hereinafter.

Other objects and features of the invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawing, the following description and claims:

In the drawing,

Fig. 1 is a perspective view of a portion of a roof structure including strip or roll roofing in overlapped relation, the invention being applied thereto in anchored and anchoring relation, part of the upper strip being cut away to illustrate the mounting of the anchorage, and the latter adjacent said cut-away portion being shown in position prior to roofing anchorage.

Fig. 2 is a perspective view of a length of the anchorage illustrating the preferred form of same.

Fig. 3 is a plan view of a portion of a sheet metal strip, showing the initial fabrication step of forming the anchor strip.

In Fig. 3 is illustrated a sheet A of zinc or galvanized iron which may come in rolls of any desired length or width, say two or three feet wide. The identical waste portions at opposite sides are designated by B and C. Portions B and C may be identical in one form of the invention. In the preferred form, however, same are not identical. Portions B and C are, however, of the same width so that in anchor strip fabrication from sheet stock the total waste portion is the length of the strip, roll or sheet and of a width equal to the width of any waste portion B or C.

Each anchor strip is broadly a series of sequentially connected V-shaped portions, successive portions being oppositely directed, or may be described as of U-shape with outwardly directed arm portions. The width of bases is approximately one-half inch and that of the arm portions one-quarter inch. The thickness of the sheet is approximately one-thirty-second of an inch. The overall effective width of the zig-zag strip is about an inch and a half.

Thus, the width of the waste is one inch and in a three foot width only one inch is wasted and the remaining thirty-five inches will form seventy one-half inch base width strips of an overall effective width of an inch and a half. These strips may be cut from the sheet as it is fed through the cutting rolls. Simultaneously therewith the nail holes D may be formed therein. This is the first operation.

Each anchor strip then has its outermost base edge corners struck at the same time so they extend in the same direction. These corners are indicated at E and F, same being indicated by dotted lines in Fig. 3. The base portions including same are designated by G and H, respectively and portions H include holes D. All portions G are longitudinally aligned but spaced equally apart. All portions H are similarly positioned. Portions G and H are parallel to each other but the respective spacings in the preferred form are not the same.

The third operation is preferably performed at the plant fabricating the anchor strip, although it may be deferred and performed on the job. This operation is to bend the base connecting arm portions J and K intermediate the bases G and H and along general line L so that bases G and H then lie in planes substantially transverse to each other. Note that all arms J are parallel to each other and arms K are similarly arranged but adjacent arms J and K are oppositely inclined as to direction.

When the third operation is to be performed at the anchor strip plant to reduce the cost, the die forming the barbs or prongs E and F, formed simultaneously, may be arranged to perform the longitudinal transverse bending. This eliminates

strip handling and reduces the production cost. The resulting anchor strip is illustrated in Fig. 2. Its application is illustrated in Fig. 1.

In the latter figure, 10 indicates the sheeting of the roof supported by rafters not shown. Thereon is a lower course of shingles or a lower strip of composition roofing 11. Herein, for simplicity, the latter may be assumed as the illustration. An upper strip 12 overlaps strip 11 the desired amount. In applying the invention after strip 11 has been applied, the anchor strip of the required length is positioned so the base portions H bear upon same and fold L coincides with the line of overlap desired or required, since in shingle application, shingle designs are such that a specified overlap is required with each design. These base portions, or any of them, are then secured by nails 13 which extend through holes D. The anchor strip thus may serve as an aligning strip for the next layer of shingles or roll roofing superposed thereon. As illustrated in Fig. 1 at the cut-away portion, the anchoring portions are so arranged that there is a minimum of strip interference in the nailing operation.

It is usual to coat with asphaltic cement, the adjacent lapping portions of the roofing. Then each of the upturned portions are bent along fold line L to overlie the superposed roofing layer 12 and are then hammered down. This causes barbs F to penetrate that layer 12 by extending upwardly into the same. The same action results in barbs E entering and extending downwardly into the roofing 12.

The resulting lock is that about every three to four inches three is a four-prong or barb lock that clampingly grips the roofing 12 therebetween. Note also that in the event, sheeting movement or the like tends to work loose the nails 13, the same may be hammered down by striking the roofing midway between the external locks, thus not disturbing the original roofing anchor strip connection with the roofing member.

The reason base H preferably is longer than base G is to provide clearance or sufficient space between upwardly extending barbs F on the former so that nail 13 may be driven home without damage to said barbs. The sequentially connected bases H serve as a hold-down device for upper portion of the lower layer 11 of roofing, as well as serve as bearing members for the nail-heads to prevent the driving of same through the roofing. The sequentially connected bases G thus also serve as a hold-down device for the lower edge of the upper roofing layer, preventing wind lifting thereof.

As previously described, the arms of the anchor strip are bent midway along the general line L. However, if desired, these arm bends need not be accurately aligned but may be slightly inclined from the general longitudinal alignment as designed at L' in Fig. 2. This formation results in a "twist" as it were, which is superior to the accurately aligned bend arrangement initially described.

The resulting clasp action is such that the arms and base portions G indent in the free edge and upper face of the upper layer 12 of roofing. The clasp action is such that the necessity of forming the preformed double bend arrangement described in said patents, which interfered with nailing, is eliminated.

Note that relative to the lower portion of the upper roofing layer, there is in effect an alternate under and over association of the anchor strip therewith, which might be broadly termed secured in "cat-stitch" arrangement.

It will also be noted, relative to the foregoing patents, that a strip approximately an inch and a quarter in width was required or a two inch width would be required for two strips, so that for a 36'' width of sheet, thirty-six strips only would be formed whereas for the present invention seventy lengths could be fabricated or nearly a hundred percent increase in volume.

Furthermore, it is to be observed that the patented structure includes a continuous flat strip. When applied to a roof with a "dip" a slight "cupping" difficulty with the flat portion was experienced which usually occasioned objectionable results. The present invention by its alternate reversely directed "zig-zag" or "rick-rack" formation readily lends itself to roof conformation and at the same time holds the several roofing layers in intimate and immediate contact relation with each other and the sheeting.

The reissue patented strip, when located by two nails, fixed the location for the entire strip. This is not the case with the present invention for in effect to a slight degree same is capable of adjustment as to position anchorage as if it were articulated.

When present invention strips are fabricated to standard lengths the end holes D may be offset from the hole alignment so that when butt joined, the adjacent end nails would be offset and not split the sheeting. Likewise, the successive holes D, being three or four inches apart may be alternately offset for the same purpose. For formation from a roll of sheet metal, however, holes D would be aligned as shown, unless the forming roll contained a number of holes half of which were offset one way and the other half the other way and the number of corresponding V-formations on the rolls was an even number.

It will also be observed that the roofing lower layer hold-down portions H are spaced apart only sufficient to provide spacing registering with the upper layer clasp and hold-down arrangement, so that upper layer anchorage exerted by hammer pressure on portions G insures roof layer consolidation and depression toward and upon the sheeting.

Other minor objects and features of this invention will be apparent from the foregoing description and the illustrations.

While the invention has been illustrated and described in great detail in the foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. A roofing anchor comprising a flat metal strip cut to provide spaced longitudinally aligned identical base portions, arms integral with and projecting laterally from adjacent ends of said base portions in converging relation, clamp members integral with said arms and offset from said base portions opposite to the space between the latter, the outer corners of said portions and said clamps bent substantially at right angles thereto in the same direction to provide prongs,

said arms bendable upon themselves to dispose said clamp in its entirety between said base portions with said prongs spaced from and disposed at substantially right angles to each other.

2. A roofing anchor comprising a flat metal strip cut to provide identical spaced longitudinally aligned base portions, arms integral with said portions and projecting laterally from adjacent ends thereof in outwardly converging relation, clamp members integral with and connecting the outer ends of said arms and disposed laterally offset from said base portions and opposite to the space between the latter, prongs projecting from said base portions and said clamp members at right angles thereto and in the same direction, said arms bendable upon themselves to dispose said clamp member in its entirety between said base portions with the prongs thereof spaced from the prongs of the base portions and disposed in directions opposite thereto, and said base portions having openings therein to receive a securing element.

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