Nov. 17, 1953 A. ALVAREZ, JR 2,659,323

ROOFING OR SIDING ASSEMBLY

Filed June 5, 1951

Fig. 1

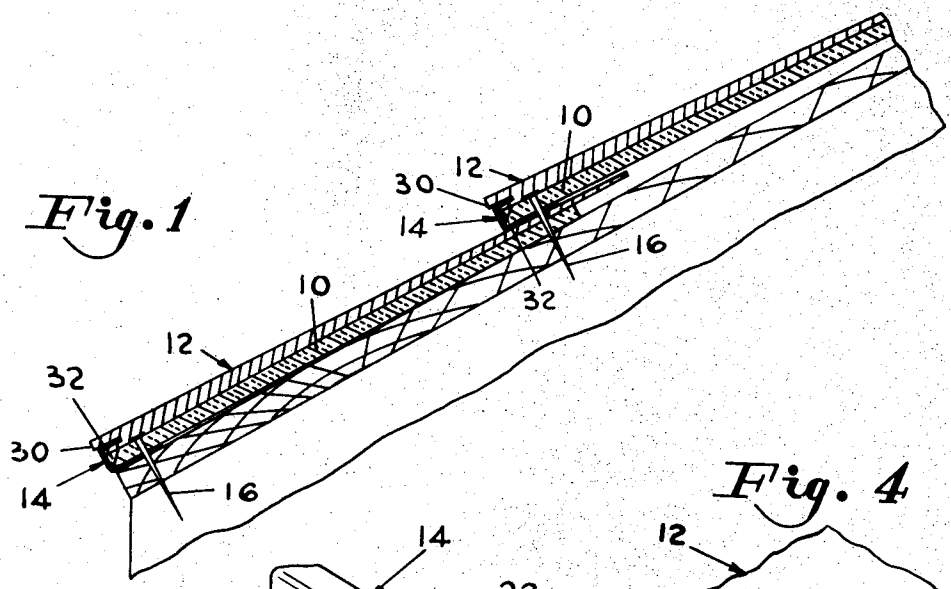
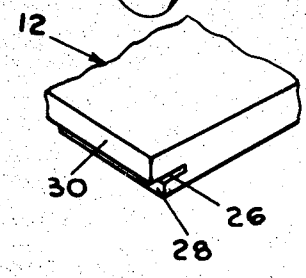


Fig. 4



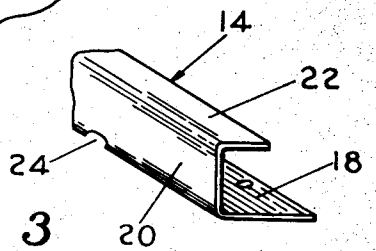


Fig. 3

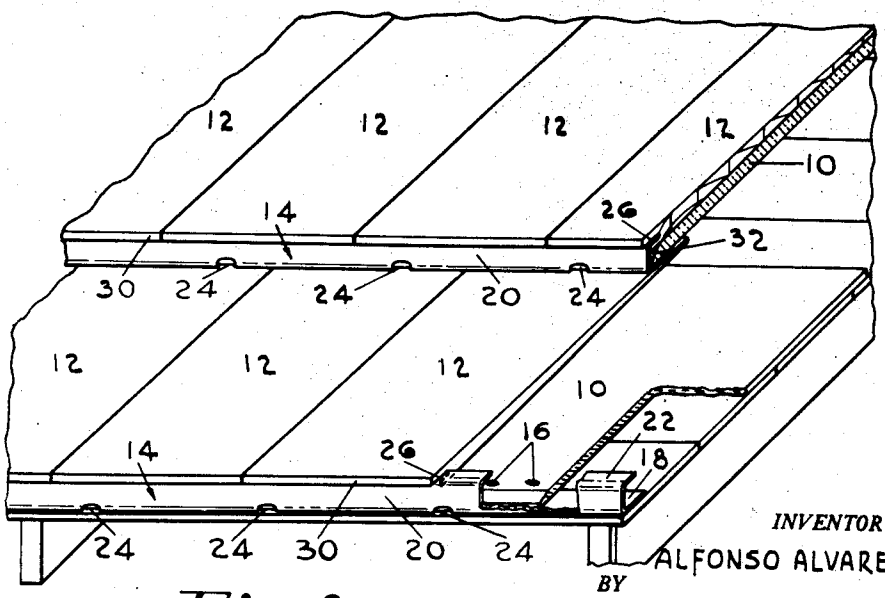


Fig. 2

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ROOFING OR SIDING ASSEMBLY

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4 Claims. (Cl. 108—9)

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This invention relates to building constructions and is particularly concerned with composite structures such as the siding or roofs of buildings in which a shingle or like surface material is laid over and secured to underlying sheathing material.

Heretofore on such composite structures, difficulty has been experienced in securing both the underlying sheathing material and the shingle in such manner as to avoid the necessity of puncturing the outer surface material by nails or like securing elements. Many useful and practical means have been employed in securing composite structures with avoidance of such puncturing, one of such means being disclosed in my prior Patent No. 2,292,984 issued August 11, 1942. While such devices adequately secured the shingle or other outer surface material, they did not secure the inner sheathing material, although as in the above mentioned patent, such devices have provided a brace or support for an inner sheet. In the present construction a shingle securing strip is provided which not only engages and secures the shingle but likewise receives the inner sheathing material and constitutes the main support and securing means therefor.

It is therefore among the primary objects of the invention to provide new and improved building constructions in which both the sheathing material and the surface shingle are secured by a single element.

Another object of the present invention is to provide a building construction in which shingles and building strips are secured with their lower edges parallel and in such manner as to seal the structure by means of the sheathing strips alone so as to permit the use of lighter and less weather resistant but more decorative outer shingles.

A further object is to provide a new and improved shingle and sheathing securing strip which may be inexpensively formed and readily applied.

A further object is to provide a shingle securing strip by which a sheathing strip may be secured and supported at its lower edge by means of the same element used to support the shingle.

Another important object of the invention is to provide a shingle securing strip and manner of assembly by which a shingle and a sheathing strip is jointly and securely applied and by which the structure is vented to prevent rotting or other damage due to accumulation or retention of moisture.

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Numerous other objects and features of the present invention will be apparent from a consideration of the following description taken in conjunction with the accompanying drawing.

In the drawing:

Fig. 1 is a sectional view of a typical roof construction embodying the present invention;

Fig. 2 is a perspective view of a portion of the assembly with parts broken away;

Fig. 3 is a perspective view of a portion of the retaining strip embodied in the assemblies of Figs. 1 and 2; and

Fig. 4 is a perspective view of a portion of a shingle used in the assemblies of Figs. 1 and 2.

In that form of the invention chosen for purposes of illustration in the drawing an elongated relatively wide sheathing strip 10 is provided and preferably is formed of heat insulating material such as a compressed fibrous product or like composition material. The sheathing material also may be a fire resisting product and although the present invention is not specifically limited to its use with a sheathing structure which constitutes a weather resistant material or siding, such as here illustrated and preferred. However, it will be obvious that less weather resistant materials may be employed in the present construction in which case the outer shingle will constitute the principal weather resistant element of the assembly.

As shown in Fig. 2 the sheathing material 10 is preferably in the form of elongated strips which, for example, may be six or eight feet in length. Shingles 12 are laid over the sheathing and both the shingles and sheathing are arranged in overlapping courses with the lower ends of the shingles projecting slightly beyond the lower edges of the sheathing and engaging a retaining strip 14 which serves to hold both the shingles and the sheathing in place. The upper ends of the shingles 12 preferably project beyond the upper edges of the sheathing strips. The elements are secured to studs, rafters or other underlying members of the building by fastening means such as nails 16 which extend through the upwardly projecting base portion 18 of the retaining strip and through the lower edge of the overlapping strip of sheathing and the upper end of the underlying shingle and the upper edge of the underlying sheathing.

The retaining strip 14 is preferably of a generally U-shaped cross section and provided with an inner base portion 18, a right angularly disposed lower supporting wall 20 and a shorter upwardly extending outer flange 22. The outer

flange 22 preferably is disposed at right angles to the supporting wall 20 and thus lies substantially parallel with the inner base 18 and is spaced therefrom a distance exceeding the thickness of the sheathing. The flange 22 is designed to receive and hold the lower edges of the shingles to prevent lifting or upward working of the shingles after application thereof. The supporting wall 20 of the retaining strip is preferably provided with drainage apertures 24 to permit the escape of water or moisture which may accumulate in the base of the strip and to ventilate the construction sufficiently to avoid rotting or deterioration of the shingles and insulation material.

The shingles used in the practice of the present construction may be of light decorative material in view of the weather resistant and insulating character of the sheathing material and the method of application thereof. The shingles illustrated at 12 are preferably provided at their lower edges with an inwardly extending kerf 26 of uniform cross section and disposed substantially parallel to the inner and outer faces of the shingle. The shingle may be of uniform thickness and formed of cement-asbestos composition or other suitable material. However, a standard type of taper shingle such as those formed of cedar is illustrated and preferred. The kerf 26 extends inwardly with its sides substantially parallel to the central plane of the shingle and as here illustrated it is preferable that the kerf be disposed in such central plane although in some instances, it may be disposed closer or farther from the inner or outer surfaces of the shingle if desired. The inner face of the shingle adjacent the kerf is preferably shortened to provide an inner lip 28 of reduced length in comparison to the opposite outer lip 30 of the shingle. The shingle may be in strip form of length commensurate with or greater than the sheathing material 10, but the shingles illustrated and preferred are individual shingles of conventional width. The retaining strip 14 also may be of any desired length and may be formed of bent, rolled or extruded metal, plastic or other suitable rigid and strong material.

In applying the assembly shown in the drawing the retaining strip 12 is located adjacent the eave or lower edge of a side wall to be covered with the base portion 18 bearing against the underlying rafters, studs or wall. The lower edge of the lowermost sheathing strip is inserted into the upwardly facing recess in the strip and nails 16 are driven through the sheathing and the projecting base portion 18 of the retaining strip. The lower edge of the sheathing strip is preferably beveled to permit easy insertion and to provide for better drainage and ventilation of the assembly by avoiding obstruction of the drainage apertures 24.

After the lowermost course of sheathing has been secured in place the shingles 14 are applied by merely inserting the shorter inner lip 28 between the outer surface of the strip of sheathing material and the upwardly extending outer flange 22 of the retaining strip. The flange 22 is thus received within the kerf 26 of the shingle and seats against the base of the kerf while the edge of the inner lip 22 projects behind the flange 22 and prevents the lower edge of the shingle from being raised or lifted outward from the sheathing by wind, warping or other action. The outer lip 30 of the shingle projects somewhat beyond the wall 20 of the retaining strip

and therefore at least partially conceals the latter. However, the retaining strip and the projecting edge of the shingle cooperate to produce the appearance of a thick shingle and provide an attractive shadow line effect throughout the assembly. In the preferred construction the depth of the kerf 26 from the edge of the shorter lip 28 is preferably less than the width of the flange 22 so that an air channel 32 is left between the lower edge of lip 28 and the wall 20 to permit free drainage and ventilation through the apertures 24. However, if desired the kerf 26 may be of greater depth than the flange in which case the edge of the lip 28 will rest securely upon the upper surface of the wall 20 of the retaining strip.

After the lowermost course of sheathing and the lowermost course of shingles have been applied a second retaining strip is placed parallel to the first and over the shingles near the upper edge of the underlying sheathing, allowing sufficient overlap to insure a weather-tight construction. The next sheathing strip is then inserted into the upwardly facing recess in the second strip and nails 16 are driven through the second sheathing strip, the base portion 18 of the second retaining strip and the upper portion of the shingles and underlying sheathing strip. A second course of shingles is then slipped into place on the second retaining strip and the operations repeated to complete the assembly.

Each sheathing strip is thus secured in place by nails located near the upper and lower edges thereof and each shingle is secured in place by one set of nails and by the flange 22 of a retaining strip. Yet no nails are exposed and a tight weatherproof assembly is provided. It is preferable to have the shingle extend at least slightly beyond the overlapping edges of the sheathing material in order to secure a denser assembly and to provide firm clamping of the upper edges of the shingles between the overlapping courses of sheathing since the nails may not actually be driven through every shingle.

The assembly thus provided is remarkably simple and easy to apply and provides for ample thermal insulation by the use of sheathing material which is an effective heat insulator and which may in addition have fire resistant properties. The actual operation of applying the shingles merely requires the slipping of the shingles into place and in the event the edges of the shingles are not absolutely parallel they may be tilted to bring the edges of adjacent shingles in contact without the danger of leakage between the shingles or impairing the appearance of the assembly. The construction further is very attractive in appearance, since it simulates a thick butt shingle assembly with its characteristic and attractive heavy shadow line at the edges of each course. Moreover, the invention lends itself to use with either wooden or composition shingles and precludes lifting or raising of the lower edges of the shingles due to wind, warping or for any other reason. Moreover, if any shingles should be broken it is a very simple matter to slip the shingle upward to disengage the kerf from the outer flange of the retaining strip whereupon the shingle may be slipped downward out of the assembly and a new shingle may be inserted without disturbing any of the remaining elements of the assembly. Despite the ease of replacement the shingles are securely held in place adjacent their upper and lower edges in a manner to provide a strong durable weather-proof construction.

It will of course be understood that numerous modifications and changes in construction may be resorted to in the practice of the invention without departure from the spirit and scope thereof as outlined in the appended claims.

I claim:

1. An assembly for application to the roof or side wall of a building comprising sheathing and shingles arranged in a plurality of adjacent overlapping courses with the lower edges of the sheathing and shingles of an upper course of the assembly overlying the upper edges of the sheathing and shingles of an adjacent lower course, an elongated strip for securing the sheathing and shingles in place having a generally U-shaped cross section extending along the lower edge of said upper course, said strip having an inner extended base portion and an outer flange, the inner base portion of the strip being in contact with the outer surface of the shingles of said lower course adjacent the upper limit of the exposed portion of said shingles, the sheathing of said upper course extending into said strip so as to overlie said base portion and project beneath the outer flange of the strip, fastening means extending through said overlying sheathing of said upper course, the base portion of said strip, and the shingles and sheathing of said lower course for securing the assembly in place, the shingles of said upper course overlying said fastening means and being formed with grooves therein adjacent the free edges of the shingles into which the outer flange of said U-shaped strip extends to prevent outward movement of the free edges of the shingles.

2. An assembly as defined in claim 1 wherein the retaining strip is provided with moisture venting holes located in the portion of the strip between said inner base portion and said outer flange.

3. An assembly as defined in claim 2 in which the edge of the sheathing which extends into said strip is tapered and cooperates with said strip to provide an air channel communicating with said venting holes.

4. A building structure comprising a framework having a plurality of horizontally extending courses of material applied thereto with the upper edge of a lower course overlapped by the lower edge of an adjacent upper course, each of said courses embodying a horizontally extending retaining strip which is generally U-shaped in cross section extending throughout the lower edge of said course and having an extended base portion thereof overlying and bearing against the outer overlapped surface of said lower course, sheathing material extending lengthwise of said course with the lower edge portion thereof overlying said extended base portion of the U-shaped retaining strip, fastening means extending through said lower edge portion of the sheathing material and through said extended portion of the retaining strip and the overlapped portion of an adjacent lower course and into said framework, and a plurality of shingles extending transversely of said courses and overlying said sheathing material, said shingles each being provided with a kerf in the lower end thereof embracing the free edge of said retaining strip and held in engagement with said retaining strip by the retaining strip and fastening means of an adjacent upper course.

ALFONSO ALVAREZ, JR.

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