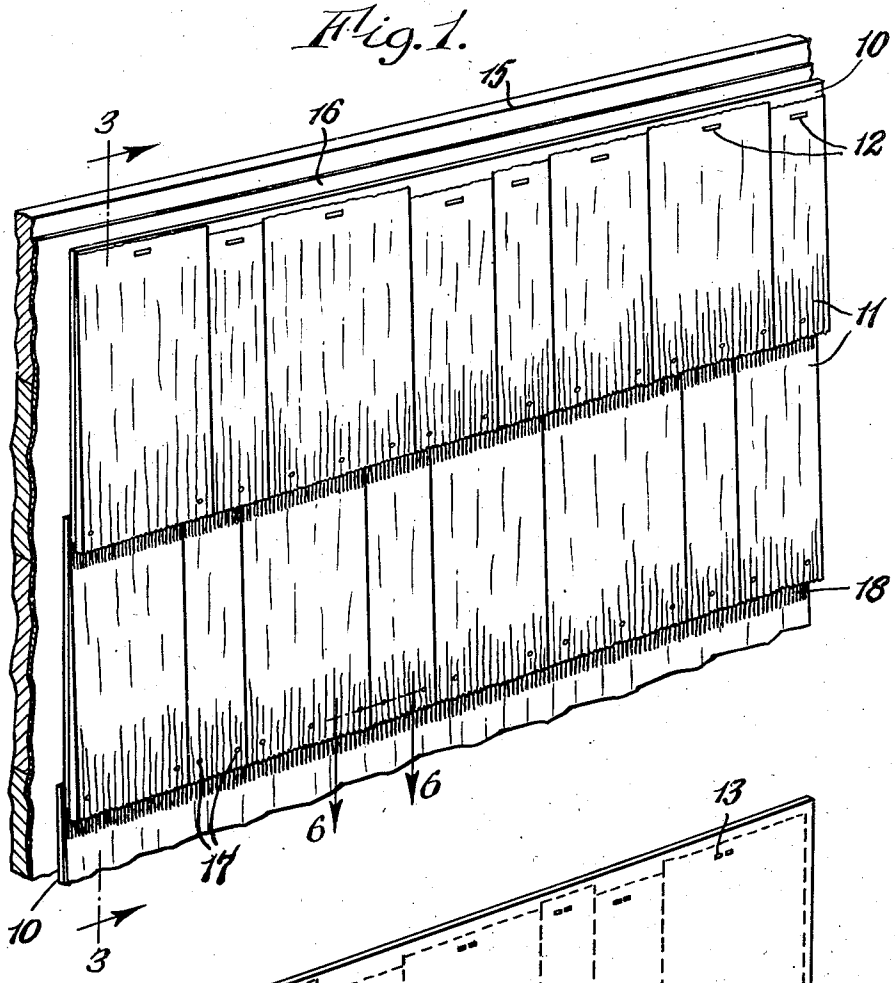
Feb. 25, 1941. H. P. KENDALL 2,232,786

SHINGLE STRUCTURE

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Fig. 1.



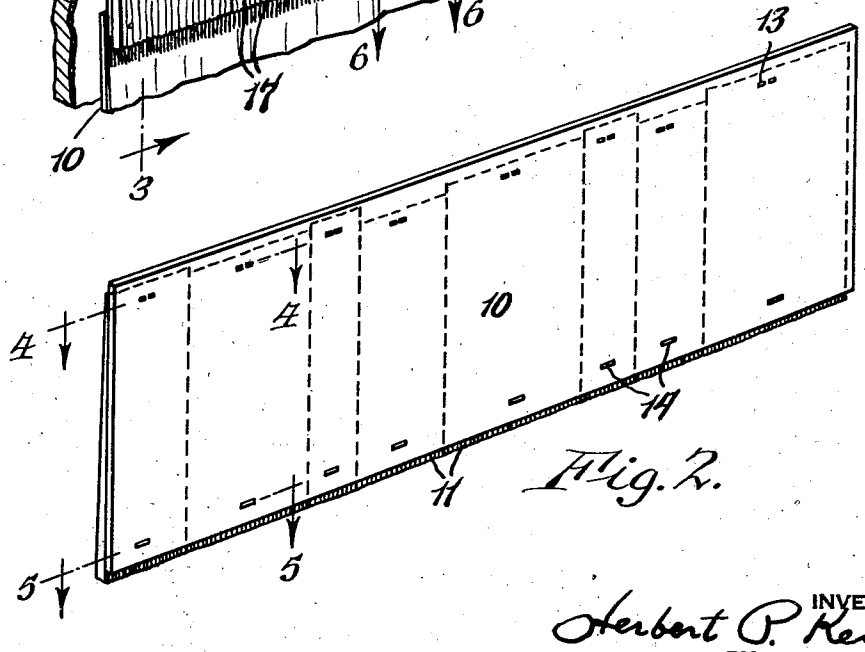


Fig. 2.

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Fig. 3.

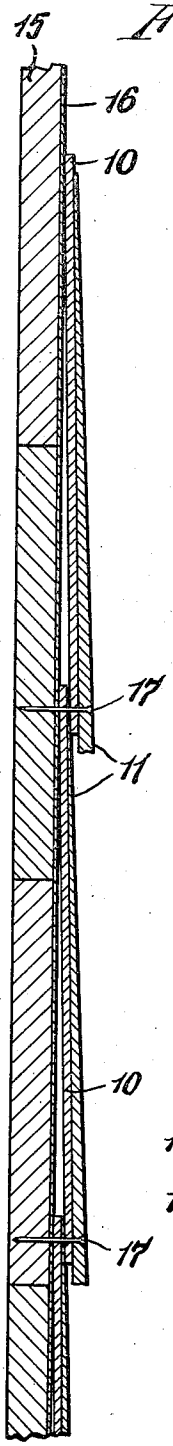


Fig. 4.

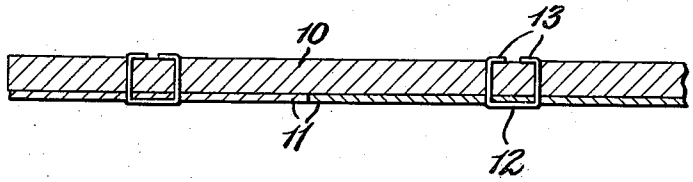


Fig. 5.

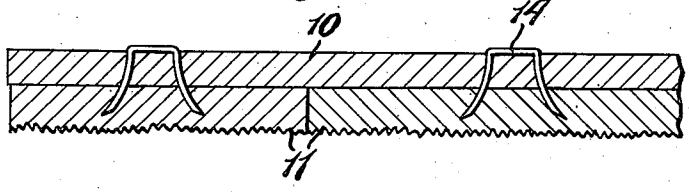
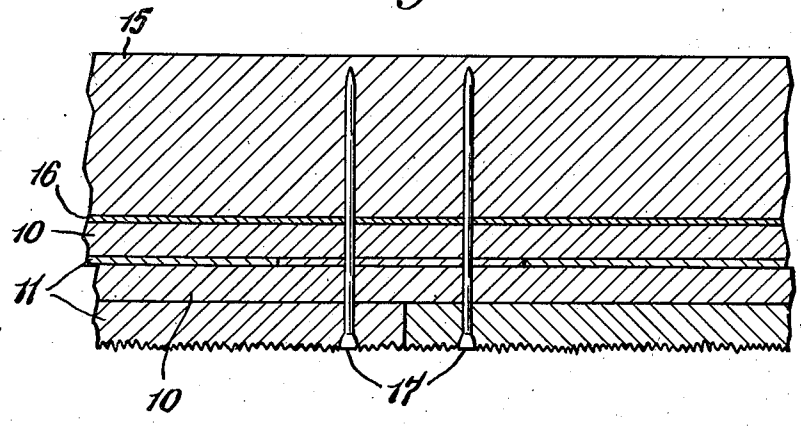


Fig. 6.



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Patented Feb. 25, 1941

2,232,786

UNITED STATES PATENT OFFICE

2,232,786

SHINGLE STRUCTURE

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Application August 28, 1939, Serial No. 292,183

9 Claims. (Cl. 108—8)

This invention relates to a shingle structure and more particularly to a shingle structure composed of an elongated foundation board to which a single row of tapered wooden shingles is attached in such manner that when applied to a wall or roof a wide shingle exposure is provided with broad deep shadow lines, the shingles and the foundation boards being so laid as to provide a weatherproof covering for the wall or roof to which they are applied and as to provide adequate thermal insulation.

One of the principal objects of the present invention is to provide a shingle structure composed of an elongated foundation board to which a row of tapered wooden shingles is attached in such relation that when the shingled foundation boards are laid the shingles have a wide exposure and have broader and deeper shadow lines than would be provided by the thickness of the shingles if laid in the normal manner. By this means highly artistic shingling can be achieved at low cost, since relatively thin shingles can be employed to achieve the wide exposure and deep shadow line characteristics and at the same time the application of the shingles to the foundation board is effected as a factory operation, the application of the shingles to the roof merely requiring the nailing of the relatively large shingled foundation backing boards in place.

Another object of the invention is to provide a shingle structure in which tapered wooden shingles of varying length and width are employed, the row of shingles covering substantially the entire area of the foundation board so that the shingled foundation boards can be laid in overlapping relation and secured to the wall or roof by nails driven through the butts of the course of shingles being laid and also the foundation board of this course and through the tapered ends and the foundation boards of the course of shingles overlapped by the course being laid. By this means the maximum exposure of the shingles can be obtained and at the same time a weathertight joint provided, the nails passing through four thicknesses of shingles and foundation boards and insuring against water leakage.

Another object of the invention is to provide a shingle structure composed of an elongated foundation board carrying a single row of tapered shingles in which each shingle is attached to the foundation board by a pair of staples at its opposite end, the staple securing the butt of each shingle to the board being so provided as to extend only partway through the butt from the rear side of the shingle and at the same time securely hold the butt end of the shingle in position. By this means when the shingle structures are laid there are no opposed staples.

Another object of the invention is to provide such a low cost shingle structure which can be used in connection with any type of style of shingle and in which the shingles can be attached to the foundation board so as to provide any desired regular or irregular butt effect in the finished structure.

In the accompanying drawings:

Fig. 1 is a fragmentary perspective view of a wall showing the manner in which the multiple shingle units forming the subject of the present invention are applied to the sheathing to provide wide exposure and broad deep shadow line characteristics.

Fig. 2 is a rear perspective view of one of the foundation boards shown in Fig. 1 and showing the manner in which wooden shingles of random width and irregular length are stapled thereto.

Fig. 3 is an enlarged fragmentary vertical section, taken on line 3—3, Fig. 1.

Figs. 4 and 5 are enlarged fragmentary horizontal sections, taken on the correspondingly numbered lines of Fig. 2.

Fig. 6 is an enlarged fragmentary horizontal section, taken on line 6—6, Fig. 1.

The multiple shingle units forming the shingle structure are each composed of a foundation board 10 to which a row of tapered wooden shingles is secured. Each of the foundation boards 10 is of rigid form and is preferably made of a composition which will resist weathering and at the same time is nailable. Each foundation board is of approximately the same width as the length of the shingles attached to it, the row of shingles 11 attached to the foundation board thereby covering substantially its entire area except for that portion at the head of the board necessarily exposed because of the random lengths of the shingles. The row of shingles 11 is so applied to each foundation board that the butts of the shingles project a substantial distance beyond the lower edge of the foundation board and the butts so projecting can either be arranged in a straight line, as illustrated, or can be staggered to provide a ragged butt effect when laid. In either event the butts of the shingles are arranged to project beyond the lower edge of the foundation board 10.

The shingles 11 can be of random widths and irregular lengths, as illustrated, and each shingle is attached to the foundation board by a pair of staples. The pair of staples securing each

shingle 11 is preferable arranged at approximately the centerline of the shingle. In securing the shingles to the foundation board each shingle is arranged in proper position and stapled by a staple 12 driven through from the front side of the shingle, the legs of this staple passing through the foundation board 10 and emerging through the rear face thereof and being clinched against the rear face of the foundation board, as best illustrated at 13 in Fig. 4. The exposed legs of the staples 12 serve as guides in applying the staples 14 which secure the butts of the shingles to the foundation board 10. These staples 14 are applied from the rear side of the foundation board 10, each staple 14 being located directly under the corresponding staple 12. The legs of the staples 14 do not extend through the butts of the shingles and are preferably so applied that the legs flare either outwardly, as illustrated, or inwardly so as to provide a firm interlock between the butt end of each shingle and the foundation board without extending through the foundation sheet and shingles and being clinched over as with the staples 12.

The row of shingles 11 on each sheet can extend from one end thereof to the other or the row can be arranged in slightly offset relation to the foundation board so as to leave a small projection of the shingle at one end of the board and a corresponding small exposure of the foundation board at the opposite end, this permitting the multiple shingle units to be laid up with a small overlap of the shingle on one board over the end of the adjacent board.

In applying the multiple shingle units to a wall or roof the sheathing 15 is preferably first covered with building paper 16. The multiple shingle units are then laid up in a slightly overlapping relation, the lower ends of the foundation boards 10 of the course being laid being placed to overlap the ends of the shingles of the course immediately below so that the lower part of each foundation board extends over and covers the row of staples 12 of the next lower course of shingles. When so arranged the multiple shingle units are secured in position by the simple expedient of driving a pair of rustproof nails 17 through the butt of each shingle of the unit being laid, this nail passing through the butt of each shingle and its foundation board 10 and thence through the tapered ends of the row of shingles in the next succeeding lower course and the foundation board 10 which carry these shingles. By this means it will be seen that each of the rustproof nails 17 pass through four thicknesses of shingles and foundation boards before being driven into the sheathing 15 and as the butt of each shingle is secured by a pair of rustproof nails it will be seen that each shingle is firmly secured in position and a weathertight joint achieved and at the same time the maximum exposure of each shingle obtained so as to achieve highly ornamental shingling with the minimum number of shingles. At the same time the use of the composition foundation boards 10 further insures weathertight shingling, since the number of joints extending through to the sheathing is greatly reduced.

As previously stated the butt ends of the shingles 11 are arranged to project below the lower edges of the foundation boards 10 to which they are applied. When applied to the siding 15 in the manner described, it will therefore be seen that the butt of each shingle is held a substantial distance from the face of the succeeding lower row of shingles thereby to achieve a broad deep shadow line 18 for each course of shingles. The effect of such broad deep shadow line provides the appearance of shingles having exceptionally thick butts and shingles laid in accordance with the present invention thereby achieve the appearance of costly thick butted shingles with comparatively inexpensive and relatively thin shingles.

It will be understood that any type of shingle 11 can be employed to achieve any desired effect and hence that the invention can be employed to provide any desired shingle effect, it being, however, particularly applicable where a wide exposure of the shingles is desired.

From the foregoing it will be seen that the present invention provides a low cost shingle structure which can be quickly and easily applied to the wall or roof of a building and provide adequate weather protection therefor and at the same time provide shingling characterized by wide exposures and broad deep shadow lines characteristic of thick butted expensive shingles. It will further be seen that the invention provides a minimum head lap of both the shingles and the foundation boards thereby to effect the maximum economy in the amount of materials required for shingling a building and that the shingles can be of random width and slightly irregular length, the legs of the staples securing the tapered end of the shingles serving as guides for the application of the staples applied from the rear of the foundation boards and extending only partway through the butt of each shingle. It will also be seen that in the completed shingled building no staples are exposed and that by employing rustproof nails 17 there is no danger of the metal fastenings staining the shingles.

I claim as my invention:

1. As an article of manufacture, a shingle structure, comprising a rigid elongated nailable composition foundation board of substantial thickness and a single row of tapered wooden shingles of random width and irregular length attached to said foundation board with their butts arranged along one longitudinal edge thereof and covering substantially the entire face of said foundation board.

2. As an article of manufacture, a shingle structure, comprising a rigid elongated nailable foundation board of substantial thickness and a single row of tapered wooden shingles of random width and irregular length attached to said foundation board in edge to edge relation and with their butts projecting a substantial distance beyond the lower longitudinal edge of said foundation board and said shingles covering substantially the entire face of said foundation board.

3. As an article of manufacture, a shingle structure, comprising a rigid elongated nailable foundation board of substantial thickness and a single row of tapered shingles applied to said foundation board with their butts arranged along the lower longitudinal edge thereof, and means for attaching said shingles to said foundation board comprising a staple passing through the tapered end of each shingle and the foundation board and another staple passing through said foundation board and extending only part way into the butt of each shingle.

4. As an article of manufacture, a shingle structure, comprising a rigid elongated nailable foundation board of substantial thickness and a single row of tapered wooden shingles applied to said foundation board with their butts ar-

ranged along the lower longitudinal edge thereof and means for attaching said shingles to said foundation board, comprising a two-legged staple driven through the tapered end of each shingle and said foundation board from the front with its legs exposed on the rear side of said foundation board and another staple driven into said foundation board and the butt of each shingle from the rear and extending only part way into and embedded in the butt of the shingle.

5. As an article of manufacture, a shingle structure, comprising a rigid elongated nailable foundation board of substantial thickness, a single row of tapered wooden shingles of random width and irregular length applied to said foundation board in edge to edge relation and with their butts projecting a substantial distance beyond the lower longitudinal edge of said foundation board and said shingles covering substantially the entire front face of said foundation board and means for attaching said shingles to said foundation board, comprising a two-legged staple driven through the tapered end of each shingle and said foundation board from the front with its legs clinched against the rear side of said foundation board and another two-legged staple driven into said foundation board and the butt of each shingle from the rear with its legs offset and extending only part way into and embedded in the butt of the shingle.

6. A shingle structure, comprising a supporting wall, a plurality of nailable foundation boards of substantial thickness, a single row of tapered shingles attached to the front face of each foundation board with their butts arranged along the lower longitudinal edge thereof and said row of shingles covering substantially the entire front face of each foundation board, said shingled foundation boards being laid in overlapping relation against said wall with the lower longitudinal edge of each foundation board overlapping a small extent of the upper tapered ends of the row of shingles in the next succeeding lower course and means for securing said shingled foundation boards to said wall comprising nails extending through the butt of each shingle and the corresponding foundation board and extending thence through the tapered end of a shingle of the next succeeding lower course of shingles and the corresponding foundation board and being anchored in said wall.

7. A shingle structure, comprising a supporting wall, a plurality of nailable foundation boards of substantial thickness, a single row of tapered shingles attached to the front face of each foundation board with their butts projecting a substantial distance beyond the lower longitudinal edge thereof and said row of shingles covering substantially the entire front face of each foundation board, said shingled foundation boards being laid in overlapping relation against said wall with the lower longitudinal edge of each foundation board overlapping a small extent of the upper tapered ends of the row of shingles in the next succeeding lower course and means for securing said shingled foundation boards to said wall comprising nails extending through the butt of each shingle and the corresponding foundation board and extending thence through the tapered end of a shingle of the next succeeding lower course of shingles and the corresponding foundation board and being anchored in said wall.

8. A shingle structure, comprising a supporting wall, a plurality of nailable foundation boards of substantial thickness, a single row of tapered wooden shingles applied to the front face of each foundation board with their butts arranged along the lower longitudinal edge thereof and said row of shingles covering substantially the entire front face of the foundation board, means for attaching each row of shingles to its foundation board, comprising a two-legged staple driven through the tapered end of each shingle and the corresponding foundation board from the front with its legs clinched against the rear side of said foundation board and another staple driven into each foundation board and the butt of each shingle thereon from the rear and extending only part way into and embedded in the butt of the shingle, said shingled foundation boards being laid in overlapping relation against said wall with the lower longitudinal edge of each foundation board overlapping a small extent of the upper tapered ends of the row of shingles in the next succeeding lower course of shingles and concealing the first mentioned staples of said lower course and means for securing said positioned foundation boards to said wall, comprising nails extending through the butt of each shingle and the corresponding foundation board and extending thence through the tapered end of a shingle of the next succeeding lower course of shingles and the corresponding foundation board and being anchored in said wall.

9. A shingle structure, comprising a supporting wall, a plurality of nailable foundation boards of substantial thickness, a single row of tapered wooden shingles of random width and irregular length applied to the front face of each foundation board with their butts projecting a substantial distance beyond the lower longitudinal edge thereof and said row of shingles covering substantially the entire front face of the foundation board, means for attaching each row of shingles to its foundation board, comprising a two-legged staple driven through the tapered end of each shingle and the corresponding foundation board from the front with its legs clinched against the rear side of said foundation board and another staple driven into each foundation board and the butt of each shingle thereon from the rear and extending only part way into and embedded in the butt of the shingle, said shingled foundation boards being laid in overlapping relation against said wall with the lower longitudinal edge of each foundation board overlapping a small extent of the upper tapered ends of the row of shingles in the next succeeding lower course of shingles and concealing the first mentioned staples of said lower course and means for securing said positioned foundation boards to said wall, comprising nails extending through the butt of each shingle and the corresponding foundation board and extending thence through the tapered end of a shingle of the next succeeding lower course of shingles and the corresponding foundation board and being anchored in said wall.

HERBERT P. KENDALL.