Aug. 25, 1942. W. S. MILES ET AL 2,293,744

WALL CONSTRUCTION AND METHOD AND MEANS FOR MAKING THE SAME

Filed March 17, 1941

Fig. 1.

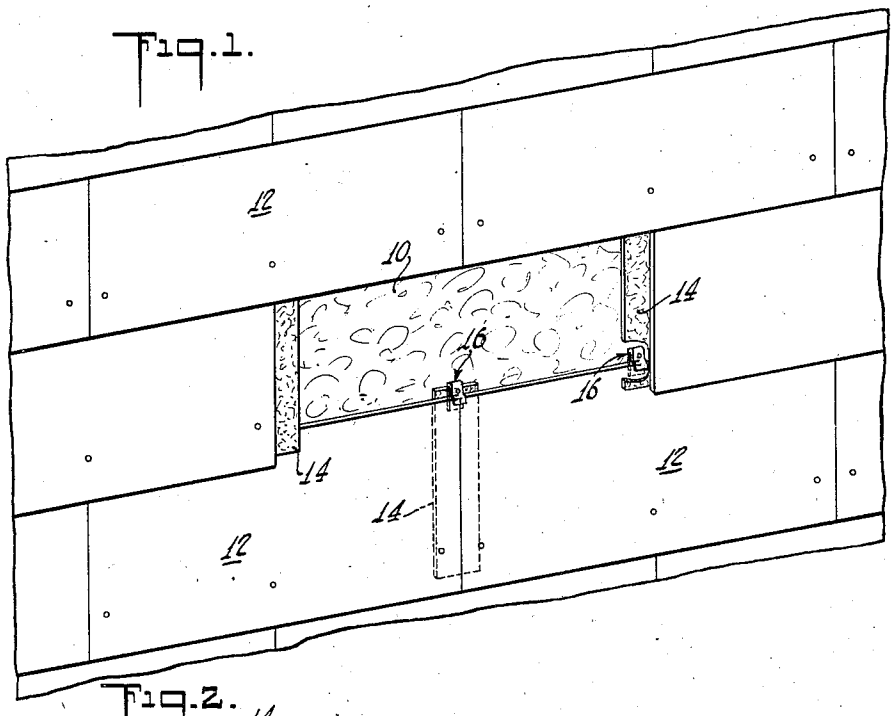


Fig. 2.

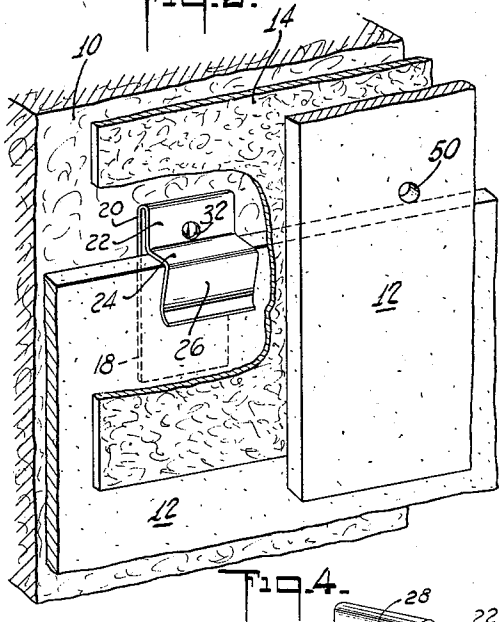


Fig. 4.

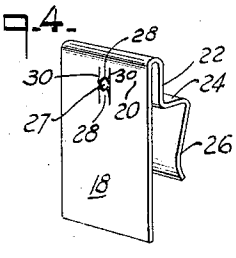
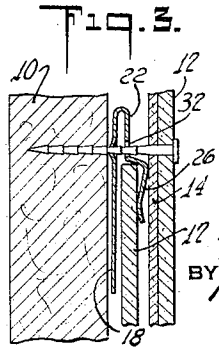


Fig. 3.



INVENTOR
WILLIAM S. MILES.
PAUL A. VOIGT.
BY Virgil C Kline
ATTORNEY

Published by AsbestosClaims.Law
asbestosclaims.law/library/23834/1

Patented Aug. 25, 1942 2,293,744

UNITED STATES PATENT OFFICE

2,293,744

WALL CONSTRUCTION AND METHOD AND MEANS FOR MAKING THE SAME

William S. Miles, Hastings on Hudson, and Paul A. Voigt, Bellerose Manor, N. Y., assignors to Johns-Manville Corporation, New York, N. Y., a corporation of New York

Application March 17, 1941, Serial No. 383,688

10 Claims. (Cl. 108—9)

Our invention relates to building constructions and, in connection therewith, to devices for securing covering units to the wall sheathing, or the like. More particularly, the invention is concerned with the provision of a method and means for replacing broken or defective shingles and other covering units on walls or partitions in which fibre board, or any similar material which has little ability to hold nails, is employed as the sheathing. It will be understood that the terms "wall" and "partition" are employed herein in a generic sense to denote both inner and outer side walls and walls such as roofs, ceilings, and the like.

It has heretofore been proposed to apply covering units, such, for example, as asbestos-cement shingles, to a sheathing of fibre board, and the like. To retain the shingle nails within the sheathing there have been employed locking devices applied over the nail shanks projecting to the rear of the sheathing, the devices positively securing the nails against withdrawal. A construction of this type is described and claimed in our co-pending application S. N. 367,198, filed November 26, 1940. When the wall has been completed, however, the rear of the sheathing becomes inaccessible due to the plaster or other interior finish, and such devices cannot be applied to the nails subsequently driven into the sheathing. Hence, if, as frequently happens, shingles are broken or defective shingles are discovered after completion of the wall, severe difficulties have been met in permanently securing the replacement shingles.

A principal object of the instant invention is the provision of a method and means for installing replacement shingles or other covering units on a wall of the type referred to above.

Another object of the invention is the provision of a method of securing replacement units by attachment of the units to previously applied units.

A further object of the invention is to produce locking clips of a character to inter-engage with an applied unit, the clips including means for receiving and holding nails driven through the replacement units.

Our invention will be more fully understood and further objects and advantages thereof will become apparent when reference is made to the more detailed description thereof which is to follow and to the accompanying drawing, in which:

Fig. 1 is a perspective view of a wall construction illustrating the application of the method and means of the instant invention;

Fig. 2 is a detail view on an enlarged scale of a portion of the wall of Fig. 1;

Fig. 3 is a sectional view taken as on a line extending vertically through the clip in Fig. 2 with the replacement shingle applied; and

Fig. 4 is a perspective view of the preferred form of locking clip.

Referring now to the drawing, and particularly to Fig. 1, there is illustrated a building wall which, for the purposes of description, has been shown as comprising a fibre board sheathing 10 overlaid with a plurality of covering units such as asbestos-cement shingles 12. However, the invention is of equal importance where other sheathings having similar properties are used. Also, the invention may be employed to secure like advantages with any conventional or suitable type of covering units laid in overlapping courses. In the wall of Fig. 1, it is assumed that a shingle of the middle course illustrated has been found defective after completion of the wall and has been removed, or that for some reason the shingle was omitted in this course during the original wall construction. As will be understood, the instant invention may be employed in any such case and for either individual shingles or courses of shingles or other covering units. Conventional backer strips have been shown at 14 to underlie the joints between the shingles in the usual manner.

In accordance with the instant invention, a means is provided to secure the covering unit to be substituted or to be mounted to cover a shingle space left vacant in the original construction, hereinafter referred to as a "replacement shingle," to the previously applied and secured shingles of the next lower course. The upper edge of the replacement shingle is maintained in position by insertion beneath the lower edges of the shingles of the next higher course. The means for securing the lower edges of the replacement shingle comprises, in its preferred form, a locking clip 16, illustrated more in detail in Figs. 2, 4, and 5.

Locking clip 16 comprises a flange 18 adapted to extend behind a shingle of the next lower course. and an upwardly extending portion 20 preferably integrally connected to retroverted portion 22 including a right angle shoulder 24 to rest upon the upper edge of the shingle of the next lower course (see Figs. 2 and 3). If desired, the retroverted portion may be extended to provide a portion 26 overlying the front face of such shingle. Portion 20 includes a nail-receiving aperture 27, defined by spring tongues or

Published by AsbestosClaims.Law
asbestosclaims.law/library/23834/2

lips 28 preferably formed from the material of the clip by means of cuts 30. Aperture 27 is of a diameter somewhat less than that of the nail to pass therethrough. Retroverted portion 22 also includes an aperture or nail hole 32 in alignment with aperture 27 and of such diameter as to readily receive the shank of the shingle nail. The lower edges of aperture 27 and hole 32 are both in substantial alignment with shoulder 24.

In mounting a replacement shingle in accordance with the instant invention, clips 16 are positioned on a shingle of the underlying course whose upper edge defines one side of the space left uncovered by the removed or missing shingle. Flanges 18 are inserted behind the shingle of the underlying course with the shoulders 24 resting upon the upper edge of such shingle. The clips are positioned so that their nail-receiving apertures will be in alignment with nails to be driven through the replacement shingle. In the case of asbestos-cement shingles, or the like, such as here illustrated, and where preformed nail-receiving openings are provided, the clips are so placed that their apertures will be in alignment with such openings. This position may be readily determined in most cases by the nail holes made by the nails used to secure the removed shingle; otherwise the position may be determined by simple measurement, or the like. After the clips are in position, the replacement shingle is applied by inserting its upper edge beneath the overlapping edges of the shingles of the next higher course and nails are driven through the shingle, usually through preformed openings provided for this purpose, as indicated at 50 (see Fig. 2), the nail shanks penetrating the apertures in the clip and entering the sheathing therebehind. The tongues 28 defining the aperture yield during the forward movement of the nail inasmuch as the opening between them is somewhat smaller than the diameter of the nail and, upon completion of the driving action, grip the shank of the nail and prevent its withdrawal.

As illustrated particularly in Fig. 3, preferably the nails used are of the barbed-shank type conventionally used for securing asbestos-cement shingles, whereby tongues 28 engage behind the barbs to obtain a positive holding action. However, if a smooth-shank nail is employed, it has been determined that, upon any tendency toward withdrawal of the nail, the resilient tongues 28 bite sufficiently into the nail to prevent withdrawal under all normal conditions.

The instant invention has been described as particularly applicable to replacement shingles, but it will be understood that the locking clip as shown and described may serve similar functions and advantages with many types of covering units and in other situations where it is desired to secure the lower edge of a covering unit to an underlying member.

Having thus described our invention in rather full detail, it will be understood by those skilled in the art that these details need not be strictly adhered to, but that various changes and modifications will suggest themselves without departing from the scope of our invention as defined by the subjoined claims.

What we claim is:

1. A method of installing replacement shingles in a shingled surface comprising mounting a locking clip on the upper edge of a secured shingle of a next lower course, said locking clip including a flange received between said secured shingle and the sheathing therebehind and a nail-receiving aperture defined in part by locking lips arranged to bite into and secure a nail shank passing through said aperture, positioning said clip to receive a nail to be driven through said replacement shingle, applying a replacement shingle, and driving a securing nail therethrough and through said aperture.

2. A method of installing replacement shingles in a shingled construction including a sheathing having low nail-holding properties comprising mounting a locking clip on the upper edge of a secured shingle of a next lower course, said locking clip including a flange received between said secured shingle and the sheathing therebehind and a nail-receiving aperture defined in part by locking lips arranged to bite into a nail shank passing through said aperture, positioning said clip to receive a nail to be driven through said replacement shingle, inserting the upper edge of a replacement shingle beneath the lower edge of a shingle of a next higher course, and driving a securing nail through the replacement shingle adjacent its lower edge, with the shank of said nail projecting through said aperture.

3. A method of installing replacement shingles in an assembly of hardened, compressed, cementitious shingles comprising mounting a locking clip on the upper edge of a secured shingle of a next lower course, said clip including a flange received behind said secured shingle and a nail-receiving aperture defined in part by locking lips arranged to bite into and secure a nail passing through said aperture, positioning said clip to have said aperture in line with a preformed nail hole in a replacement shingle when the replacement shingle is applied, applying the replacement shingle, and driving a securing nail through said aligned hole and aperture.

4. A method of installing a replacement shingle in a shingle-receiving space in an assembly of hardened, compressed, cementitious shingles comprising mounting a locking clip on the upper edge of a secured shingle of a next lower course adjacent said space, said clip including a flange received behind said secured shingle, means resting upon the upper edge of the secured shingle, and a nail-receiving aperture in substantial alignment with the upper edge of said secured shingle, said aperture defined in part by locking lips arranged to bite into and secure a nail passing through said aperture, positioning said clip to have said aperture in line with a preformed nail hole in a replacement shingle when said replacement shingle is applied, applying the replacement shingle to fill said space, and driving a securing nail through said aligned hole and aperture.

5. A method of installing a replacement shingle in a shingle-receiving space of an assembly of hardened, compressed, cementitious shingles comprising mounting a locking clip on the upper edge of a secured shingle of a next lower course adjacent said space, said clip including a flange received behind said secured shingle, an integral retroverted portion including a shoulder resting upon the upper edge of the secured shingle, and aligned nail-receiving apertures in said retroverted portion and the portion adjacent said flange, one of said apertures defined in part by locking lips arranged to bite into and secure a nail passing through the aperture, positioning said clip to have said aperture in line with a preformed nail hole in a replacement shingle when the replacement shingle is applied, applying the replacement shingle, and driving a se-

curing nail through said aligned hole and aperture.

6. A wall assembly including a fibre board sheathing and a surface covering of rigid cementitious shingles, and locking clips securing certain of said shingles in said assembly, said clips including a flange extending behind a shingle of a lower course, a shoulder resting upon the upper edge of said shingle of a lower course, and a nail-receiving aperture defined in part by locking lips, barbed nails passing through preformed nail holes in said certain shingles and through said apertures, said lips engaging behind the barbs of said nails to retain said nails against withdrawal.

7. A wall assembly including a fibre board sheathing and a surface covering of rigid cementitious shingles, and locking clips securing certain of said shingles in said assembly, said clips including a flange extending behind a shingle of a lower course, a shoulder resting upon the upper edge of said shingle of a lower course, and a nail-receiving aperture defined in part by spring locking lips, nails passing through preformed nail holes in said certain shingles and through said apertures, said lips biting into said nails and retaining them against withdrawal.

8. A wall assembly including a fibre board sheathing and a surface covering of rigid cementitious shingles, and locking clips securing certain of said shingles in said assembly, said clips each including a flange extending behind a shingle of a lower course, an integral retroverted portion including a shoulder resting upon the upper edge of said shingle of a lower course, and aligned nail-receiving apertures in a portion adjacent said flange and in said retroverted portion, one of said apertures being defined in part by spring locking lips, nails passing through preformed nail holes in said certain shingles and through said aligned apertures, said spring locking lips retaining said nails against withdrawal.

9. A locking clip for securing shingles in a shingle construction comprising a flange for insertion behind an applied shingle, a shoulder to rest upon the upper edge of said applied shingle, and a nail-receiving aperture with its lower edge in substantial alignment with said shoulder and defined in part by spring locking lips adapted to bite into and retain a nail passing through said aperture.

10. A locking clip for securing shingles in a shingle construction comprising a flange for insertion behind an applied shingle, an integral retroverted portion including a shoulder to rest upon the upper edge of said applied shingle, aligned nail-receiving apertures in said retroverted portion and a portion adjacent said flange, one of said apertures being defined in part by spring locking lips adapted to bite into and retain a nail passing through said aperture.

WILLIAM S. MILES.
PAUL A. VOIGT.

Published by AsbestosClaims.Law
asbestosclaims.law/library/23834/4