April 3, 1956 R. L. SIERING 2,740,166

SIDING STRUCTURE

Filed April 19, 1950

Fig. 1.

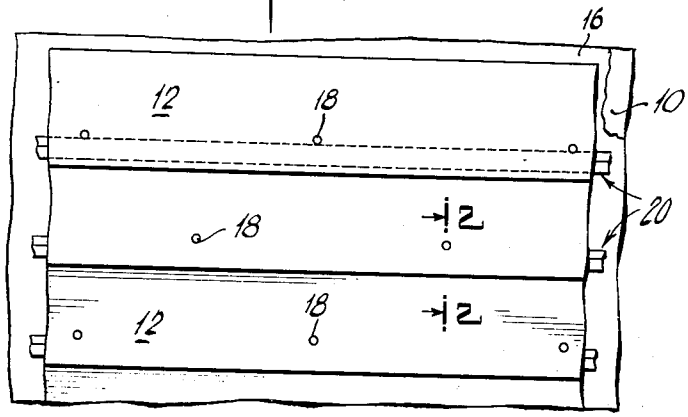


Fig. 2.

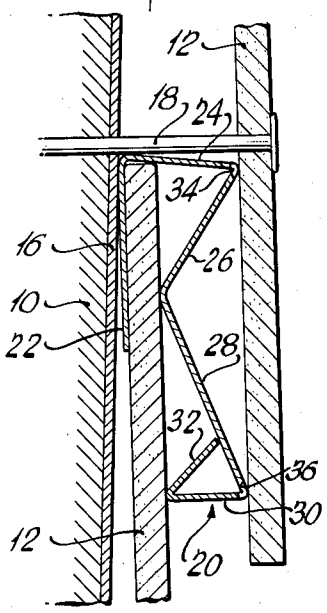


Fig. 3.

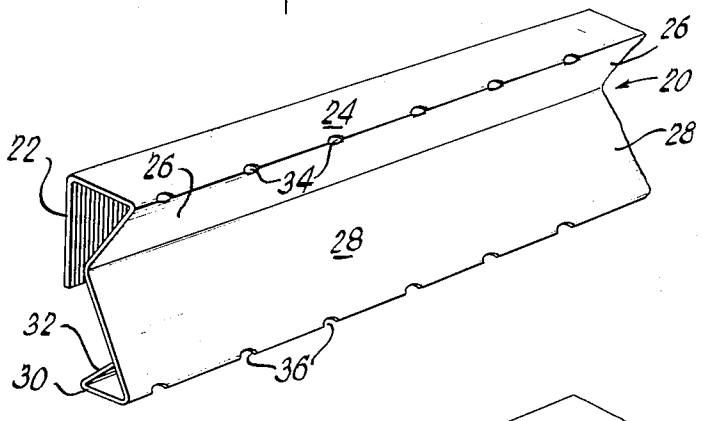


Fig. 4.

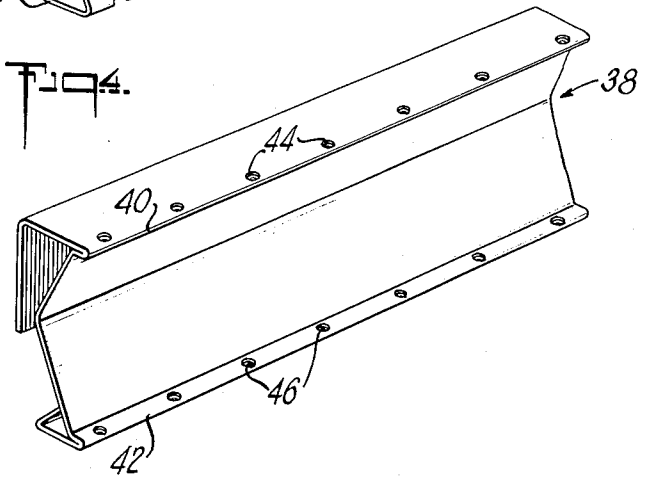
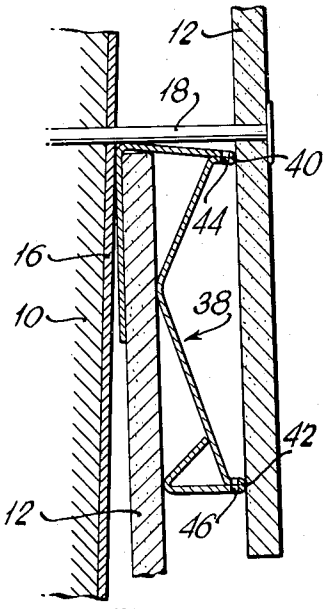


Fig. 5.



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2,740,166

Patented Apr. 3, 1956

2,740,166

SIDING STRUCTURE

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Application April 19, 1950, Serial No. 156,750

12 Claims. (Cl. 20—5)

The instant invention relates to siding constructions for buildings, and the like and more particularly to sidings of improved appearance and structural characteristics.

It is now conventional to use relatively thin siding materials, such as asbestos-cement shingles or clapboard. Generally these are laid in overlapping courses in attempted simulation of conventional wooden building materials. Due, however, to the critical difference in thickness between them and wooden shingles or siding, the simulation is poor. That is, the butt lines are not emphasized to the same extent and, in fact, from a relatively short distance the individual units are practically indistinguishable.

The instant invention has for its principal object the provision of a siding structure in which the siding units are made from relatively thin materials but the butt lines are accentuated and deep, shadow effects are obtained. More particularly an object of the invention is the provision of a siding construction embodying a spacer strip of improved design inserted beneath the butt edges of the siding, shingles or other covering units of an overlapping course to hold the butt edges outwardly from the units of the overlapped course.

Another object of the invention is the provision of a siding structure employing a spacer strip which extends over the upper edges and behind the units of the underlying course. This construction permits the strip to be readily mounted on a previously laid siding course and insures that the spacer strips will remain in position without danger of accidental displacement during the application of the succeeding course.

Another object of the invention is the provision of a spacer strip of the type referred to which will have approximately line contact with the forward face of the overlapped course of units and the rear face of the overlapping course whereby the probability of the shingles "chattering" on the spacer strips under wind action is greatly minimized or eliminated.

A further object of the invention is the provision of such spacer strip having apertures adjacent the rear faces of the overlapping units to permit drainage of moisture which may seep behind the units or may result from condensation within the wall. The positioning of the drainage openings adjacent the rear face of the overlapping units insures that the moisture will be discharged outwardly of the overlapped units to minimize staining of such units.

My invention will be more fully understood and further objects and advantages will become apparent when reference is made to the more detailed description of a preferred embodiment of the invention which is to follow, and to the accompanying drawings, in which:

Fig. 1 is an elevational view with parts broken away for clearness of illustration, disclosing a siding construction embodying the instant invention;

Fig. 2 is a sectional view on an enlarged scale, taken on the line 2—2 of Fig. 1;

Fig. 3 is a perspective view of a spacer strip employed in the construction of Fig. 1;

Fig. 4 is a perspective view of a modified form of the spacer strip; and,

Fig. 5 is a sectional view similar to Fig. 2 but disclosing the modified form of the spacer strip.

Referring now to the drawings, there is shown a siding structure comprising a base wall **10** to which there is secured a plurality of courses of overlapping covering units **12**. In accordance with conventional practice, the base wall **10** may comprise a series of spaced studs carrying sheathing and an overlying waterproofing layer **16**, the exterior covering units **12** being secured to the base wall by nails **18** or other fastening devices.

Covering units **12** may either be individual shingles or elongated siding strips, the latter being illustrated. The instant invention finds its principal field of usefulness, as previously pointed out, in connection with asbestos-cement covering units, and will be particularly described in that connection, although it will be appreciated that it is also applicable to siding structures employing units of other types. Such units, made from a compressed asbestos-cement composition, are, as previously pointed out, relatively thin, their thicknesses ranging from approximately ⅛" to 3/16". The units, either in the form of individual shingles or elongated siding strips, are conventionally secured by driving nails through preformed openings adjacent the heads and also adjacent the butts of the units, the latter nailing being referred to as "face nailing" and illustrated by nails **18**, shown in Figs. 1 and 2.

Due to the relative thinness of such units, the butt lines of overlapping courses are not accentuated and the deep shadow effect, presented by the thicker wooden units, is not obtained. In accordance with the instant invention a spacer member, indicated generally at **20**, is employed to space the butt edges of overlapping units of a course from the outer face of units of an underlying course, the spacer also serving to close the gap between the units, as clearly illustrated in Fig. 1. The spacer thus gives the appearance of thickness to the overlapping units and provides a deep shadow effect similar to that obtained by conventional wooden sidings.

In the embodiment of Figs. 1, 2 and 3, spacer **20** is folded from a single strip or blank of sheet material into the shape illustrated to provide a flange **22** which extends behind the units of the overlapped course, flange **22** being integrally connected to a forwardly extending arm **24** which overlies the upper edge of the overlapped unit and projects forwardly to contact the overlapping unit and hold it in spaced relationship to the underlying course. An arm **26** extends downwardly and rearwardly from the end of arm **24** and is integrally connected to a downwardly and outwardly extending arm **28**. The forward edge of the latter also contacts the overlapping unit and is integrally connected to a rearwardly extending, substantially horizontal arm **30**, terminating in a retroverted flange **32** whose terminal edge contacts arm **28**. As mentioned above arms **24** and **30** are proportioned to space the butt edge of the higher course the desired distance from the underlying course.

Apertures or "weep holes" **34** are provided at the bend or fold line between arms **24** and **26**, and similar apertures or "weep holes" **36** are provided in the material at the bend or fold line between arms **28** and **30**. It will be noted that the apertures **34** and **36** are thus adjacent the points of contact between the spacer member and the overlapping unit. Suitably these apertures may be formed by drilling holes through the material of the strip on the bend lines prior to the bending operation. The apertures are relatively closely spaced, as illustrated particularly in Fig. 3, and provide passages for moisture, which may be

present either as a result of condensation or of leakage and which tends to flow down the inside face of the units. The positioning of the apertures as shown has the additional advantage that it prevents or minimizes the possibility of moisture, dropping from the overlying course, staining the units of the underlying course.

The material of which the spacer strip **20** is made is preferably relatively thin, resilient sheet material, such as galvanized iron, of say, 22 gauge. Copper, aluminum and other such relatively non-corrodible metals may be used.

In laying a wall embodying the instant spacer member, after the first course of siding units is secured by the face nails, one or more of the spacer strips, depending upon the length of the course, is mounted on the upper edge of the applied course in end abutting relationship with their flanges **22** inserted behind the upper edge of the applied course and with their arms **24** extending across and resting on the upper edge of the units of the applied course. The spacer strips are thus held in position against accidental displacement during the application of the next higher course of covering units. The next higher course is then laid by driving face nails **18** through the apertures provided, the nails passing in contact, or substantial contact, with arm **24** and into the base wall structure.

The spacer strip, which is made of relatively thin material, as previously mentioned, resiliently presses the overlapping units outwardly from the wall against the holding action of the nails **18**. It will be noted that only line contact between the spacer strip and the forward face of the overlapped unit and the rear face of the overlapping unit is obtained, which reduces or eliminates the probability of chatter under wind action. The characteristics of the spacer strip also eliminate the necessity of head nails as the upper edge of the overlapped unit is resiliently pressed against the base wall structure.

Referring now to Figs. 4 and 5, a minor modification is shown. The spacer strip, indicated in these views by the reference character **38**, has the same configuration as spacer strip **20**, except that double thickness flanges **40** and **42** are formed at the fold lines for contact with the overlapping units, the apertures or weep holes **44** and **46** being placed in the flanges adjacent the points of contact with the overlapping units. This construction, though requiring additional bending operations, has the advantage of insuring that the moisture will be confined to a path along the rear face of the overlapping units.

Having thus described my invention in rather full detail, it will be understood that these details need not be strictly adhered to and that various changes and modifications may suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What I claim is:

1. In an exterior wall covering having courses of covering units with the butt edge of a unit of a course overlapping a unit of the next lower course, a spacer member behind the overlapping course, said spacer member comprising a strip of sheet material having a flange behind the unit of the lower course, and means extending over an edge of such unit and having a plurality of forwardly extending portions having vertically spaced forward edges contacting the rear face of the unit of the overlapping course, said means having also a rearwardly extending portion having a rearward edge contacting the forward face of the unit of the lower course, said forward edges being of substantial length so as to substantially close off the air space between said courses and inhibit moisture drainage along a substantial portion of the length of the units, said forwardly extending portions having openings adjacent to and spaced along said forward edges to provide for the escape of moisture past said forward edges.

2. In an exterior wall covering having courses of covering units with an edge of a unit of a course overlapping a unit of the next lower course, a spacer member behind the overlapping course, said spacer member comprising a strip of sheet material having a flange behind the unit of the lower course and means extending over an edge of such unit and having a plurality of forwardly extending portions having vertically spaced forward edges contacting the rear face of the unit of the overlapping course, said means also having a plurality of rearwardly extending portions having vertically spaced rearward edges contacting the forward face of the unit of the lower course, said forward and rearward edges being of substantial length and extending along a substantial portion of the length of the units in said courses and providing substantially line contact between the spacer member and the edge-contacted units.

3. A spacer strip for insertion between an overlapped and an overlapping covering unit comprising a strip of sheet material having a flange adapted to lie behind the overlapped unit and means extending forwardly from said flange at an angle thereto and having a plurality of forwardly extending portions having vertically spaced forward edges adapted to contact the rear face of the overlapping unit, said means having also a rearwardly extending portion having a rearward edge of substantial length adapted to extend along a substantial portion of the length of the units and to contact the forward face of the overlapped unit, said forward edges being of substantial length such as to be capable of inhibiting moisture drainage between an overlapped and an overlapping unit along a substantial portion of their lengths, said forwardly extending portions having openings adjacent to and spaced along said forward edges adapted to provide for the escape of moisture past said forward edges.

4. The invention defined in claim 3, in which said means has a plurality of rearwardly extending portions such as therein defined having vertically spaced rearward edges adapted to contact the forward face of the overlapped unit.

5. A spacer strip for insertion between an overlapped and an overlapping covering unit comprising a strip of sheet material having a flange adapted to lie behind the overlapped unit and means extending forwardly from said flange at an angle thereto and adapted to overlie an edge of such unit and having a plurality of forwardly extending portions having vertically spaced forward edges adapted to contact the rear face of the overlapping unit, said means also having a plurality of rearwardly extending portions having vertically spaced rearward edges adapted to contact the forward face of the overlapped unit, said forward and rearward edges being of substantial length and adapted to extend along a substantial portion of the length of the units to provide substantially line contact between the spacer member and the covering units.

6. A spacer strip for insertion between an overlapped and an overlapping covering unit comprising a strip of sheet material having a flange adapted to lie behind the overlapped unit, a first arm extending forwardly from said flange at an angle thereto and adapted to overlie an edge of such unit and having a forward edge adapted to contact the rear face of the unit of the overlapping course, said forward edge being of substantial length such as to be capable of inhibiting moisture drainage between an overlapped and an overlapping unit along a substantial portion of their lengths, and a second arm extending rearwardly and downwardly from said forward edge and having a rearward edge of substantial length adapted to extend along a substantial portion of the length of the units and to contact the forward face of the overlapped unit, said first and second arms having openings through their forward portions adjacent to and spaced along said forward edges adapted to provide for the escape of moisture past said edge, and a third arm extending forwardly from said rearward edge and having a forward edge adapted to contact the rear surface of the overlapping unit and of substantial length, comparable to that of the first-mentioned forward edge, said third arm having open-

ings therethrough adjacent to and spaced along its forward edge.

7. The invention defined in claim 6, and a fourth arm extending rearwardly from the forward edge of the third arm and having a rearward edge of substantial length, comparable to that of the first mentioned rearward edge, adapted to contact the forward face of the overlapped unit, both said third and fourth arms having openings through their forward portions adjacent the forward edge of the third arm adapted to provide for the escape of moisture past that edge.

8. The invention defined in claim 7, and a fifth arm extending forwardly from the rearward edge of said fourth arm and contacting said third arm along a substantial portion of its length.

9. A spacer strip for insertion between an overlapped and an overlapping covering unit comprising a strip of sheet material having a flange adapted to lie behind the overlapped unit, a first arm extending generally forwardly from said flange at an angle thereto and adapted to overlie an edge of such unit and having a forward edge, a second arm extending rearwardly and downwardly from said forward edge and having a rearward edge, a third arm extending generally forwardly from said rearward edge and having a forward edge spaced below the first-mentioned forward edge, and a fourth arm extending generally rearwardly from the forward edge of the third arm and having a rearward edge spaced below the first-mentioned rearward edge, said forward and rearward edges being of substantial length and adapted to extend along a substantial portion of the length of the units and to contact the rear face of the overlapping unit and the forward face of the overlapped unit, respectively.

10. The invention defined in claim 9, and a fifth arm extending generally forwardly from the rearward edge of the fourth arm and contacting the third arm along a substantial portion of its length.

11. A spacer strip for insertion between an overlapped and an overlapping covering unit comprising a strip of sheet material having a flange adapted to lie behind the overlapped unit, a portion extending forwardly from said flange at an angle thereto and adapted to overlie the upper edge of the overlapped unit, said portion having a forward edge and a double thickness area thereat, said forward edge being adapted to contact the rear face of the overlapping unit, and means extending rearwardly and downwardly from said double thickness area and having a rearward edge adapted to contact the forward face of the overlapped unit and having a forwardly extending portion having a forward edge and a double thickness area thereat, the last-mentioned forward edge being adapted to contact the rear face of the overlapping unit, said double thickness areas having apertures therethrough to permit the escape of moisture past said forward edges.

12. A spacer strip for insertion between an overlapped and an overlapping covering unit comprising a strip of sheet material having a flange adapted to lie behind the overlapped unit, a portion extending forwardly from said flange at an angle thereto and adapted to overlie the upper edge of the overlapped unit, said portion having a forward edge and a double thickness area thereat, said forward edge being adapted to contact the rear face of the overlapping unit, a first arm extending downwardly and rearwardly from said double thickness area and having a rearward edge adapted to contact the forward face of the overlapped unit, a second arm extending downwardly and forwardly from said first arm and having a forward edge having a double thickness area thereat, the last-mentioned forward edge being adapted to contact the rear face of the overlapping unit, a third arm extending rearwardly from said last-mentioned double thickness area and having a rearward edge adapted to contact the forward face of the overlapped shingle, and a flange carried by said third arm and extending forwardly and upwardly into contact with the second arm, said double thickness areas having apertures therethrough to permit the escape of moisture at said forward edges.

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