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FASTENING MEANS FOR SUPPORTING SIDING PANELS

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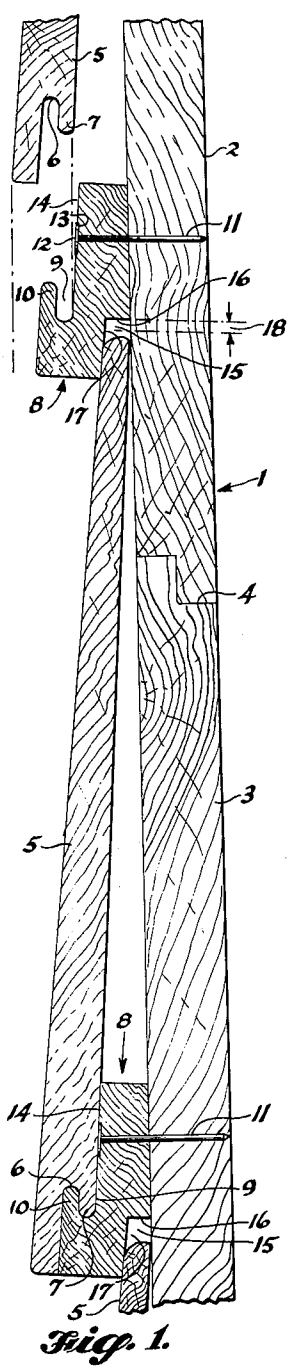


Fig. 1.

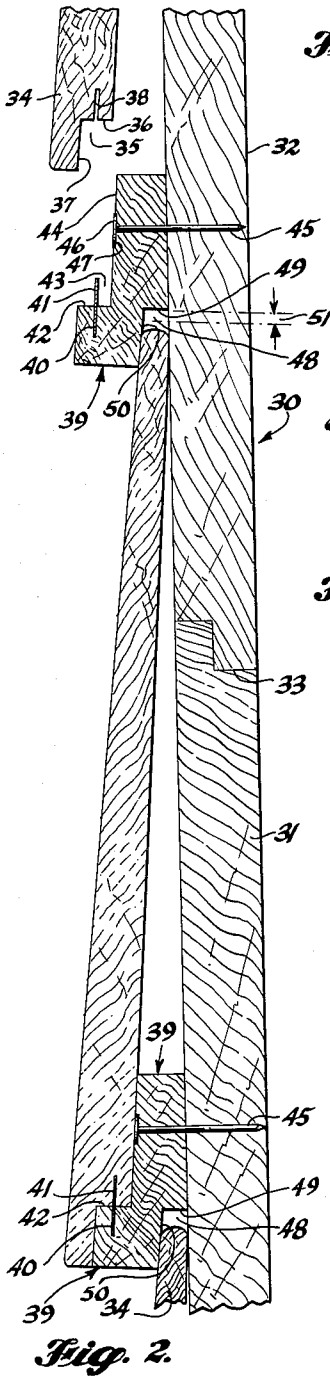


Fig. 2.

Fig. 3A.

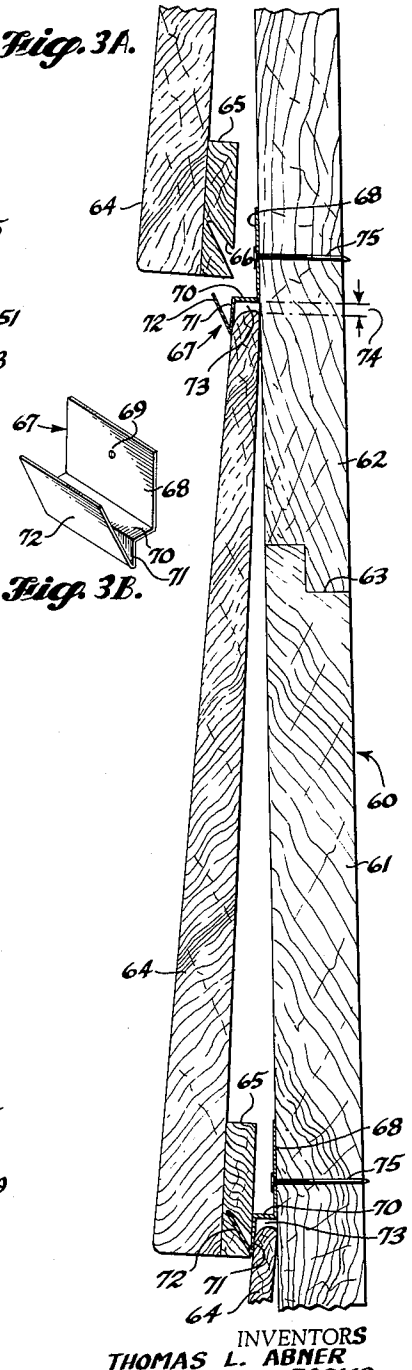


Fig. 3B.

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FASTENING MEANS FOR SUPPORTING SIDING PANELS

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This invention relates to support structures for fastening siding to buildings. More specifically, this invention relates to a fastener for supporting siding on a building that will prevent cupping or bowing of the siding.

Heretofore, it has been the practice to fasten siding to buildings with a clip structure either nailed to the wall of the building with the upper end of the siding abutting the clip or nailed through the upper end of the siding and then into the wall. Such a construction is shown and described in Benson U.S. Patent No. 3,029,560 and Wahlfeld U.S. Patent No. 2,648,103.

These devices have proven to be unsatisfactory because the wood siding will cup upon being exposed to different weather conditions that exist in different geographical areas. This is caused by expansion of the siding in a transverse direction. Since the siding is rigidly held in place, it will cup or bow outwardly to form a generally convex surface which greatly reduces the effectiveness, life and appearance of the siding.

An object of this invention is to provide a mechanism for fastening siding to a building.

Another object of this invention is to provide a mechanism for fastening siding to a building that greatly increases the effectiveness, life and appearance of the siding.

These and other objects and advantages will become manifestly clear to those skilled in the art when taken in conjunction with the detailed drawings and description, wherein:

FIGURE 1 is a cross-sectional view of a first embodiment of the invention illustrating the manner in which siding is fastened to a building wall.

FIGURE 2 is a cross-sectional view of a second embodiment of the invention illustrating the manner in which siding is fastened to a building wall.

FIGURE 3A is a cross-sectional view of a third embodiment illustrating the manner in which siding is mounted on a building wall.

FIGURE 3B is a perspective view of the building clip used in the modification of FIGURE 3A.

Referring now to the drawings and in particular to FIGURE 1, the numeral 1 designates the wall of a building being formed of boards 2 and 3 joined together by a lap joint 4. Wood siding 5 is fastened to the side of the wall by fastener members 8.

The wood siding 5 is provided with a groove 6 on its lower interior end having a rib 7 extending downwardly on the interior thereof. The rib 7 is complementary with a groove 9 in fastener member 8 and is adapted to extend therein. The fastener 8 is provided with a rib 10 which extends into the groove 6 on the lower end of the siding 5 which completely supports the siding 5.

The lower interior portion of the siding fastener 8 is provided with a recess 15 having an upper transverse surface 16 and a side longitudinal surface 17. The recess 15 provides a space 18 between the upper end of the siding 5 and the upper surface 16 to provide for transverse expansion of the siding 5.

The siding fastener 8 is fastened to wall 1 of the building by a nail 11 which is driven through the upper portion of the fastener 8. The upper portion 14 of the siding fastener 8 is slightly inclined so as to be complementary with the inner surface of the siding 5. The nail 11 is provided

with a head 12 which is embedded in a countersink portion 13 on the surface of the fastener 8.

Accordingly, when the siding 5 is seated in the groove 9 in the fastener 8 and the rib 10 of the fastener 8 extends up into the groove 6 in the lower end of the siding 5, the siding 5 is completely supported at its lower end. However, the upper end thereof extends into the recessed portion 15 and the space 18 provides for transverse expansion of the siding 5 to prevent any cupping or bowing of the siding 5.

Referring now to FIGURE 2, a second modification of the present invention is disclosed. In this modification the building wall 30 is provided with boards 31 and 32 joined together by a lap joint 33. Siding 34 is adapted to be fastened or supported by the wall by fastener members 39.

The lower end of the siding 34 is provided with a recess 35 having an upper transverse surface 36 and a side surface 37. Intermediate the ends of the transverse surface 36 a groove or slot is provided that cooperates with a metal spline 41 seated in a slot 40 in the fastener 39.

The fastener 39 is provided with a recess 43 having a longitudinal surface 44 and a transverse surface 42. The surface 42 is provided with a slot 40 which receives the metal spline 41.

The lower interior portion of the fastener 39 is provided with a recess 48 having an upper transverse surface 49 and longitudinal surface 48 providing a space 51 which receives the upper portion of the siding 34 and allows for transverse expansion thereof.

The fastener 39 is mounted on the wall 30 by a nail 45 having a head 46 extending into a countersink 47 through the surface 44 of the fastener 39.

Accordingly, the siding 34 is supported by the metal spline 41 extending into the slot 38 in the lower portion thereof. The surfaces 36 on the lower portion of siding 34 and the transverse surface 42 on the fastener 39 are complementary with each other so that the siding 34 is completely supported by the fastener 39. Also, it should be pointed out that the surface 44 on the fastener 39 is complementary with the interior surface of the siding 34. The upper end of the siding 34 extends into the recessed portion 48 and provides a space 51 which allows for expansion of the siding 34 to prevent bowing or cupping of the siding.

Referring now to FIGURE 3A of the drawings, a third embodiment of the present invention is disclosed. In this embodiment the wall 60 is formed with boards 61 and 62 joined together by lap joint 63. The wall portion is adapted to support siding 64 by a metal clip 67.

The interior portion of the siding 64 is provided with a siding support 65 secured thereto and having a V-groove 66 which is inclined in upwardly and inwardly direction.

The V-groove 66 is adapted to receive the metal support clip 67 which is supported by the wall portion 60 by a nail 75 driven through a hole 69 through the first vertical wall portion 68 of the clip 67.

The first vertical portion 68 of the metal clip 67 is integrally connected by a transverse portion 70 which is integrally connected by a second vertical portion 71 which is integrally connected to an upwardly and outwardly inclined rib portion 72 which extends into the V-groove 66 of the siding support 65.

Between the lower terminal portion of the inclined rib 72 and the transverse portion 70, a recess 73 is formed which is adapted to receive the upper end of the siding 64 and allow a space 74 between the transverse portion 70 and the extreme upper end portion of the siding 64. This recess is provided to allow expansion of the siding 64 in a transverse direction which will prevent bowing or cupping of the siding 64.

In each instance of the present invention, the recess 15

in FIGURE 1, recess **48** in FIGURE 2 and recess **73** in FIGURE 3A are of a dimension to provide spaces **18, 51** and **14** a length of between about ⅛" and ¼". By providing a range of this magnitude, the sidings **5, 34** and **64** are allowed ample room to expand in a transverse direction and thus will not bow. Moreover, the fasteners **8** and **39** may be formed of wood, plastics, metal or the like, while clip **67** may be formed of metal or plastic.

While specific details of preferred embodiments have been set forth above, it will be apparent that many changes and modifications may be made therein without departing from the spirit of the invention. It will therefore be understood that what has been described herein is intended to be illustrative only, and is not intended to limit the scope of the invention.

What is claimed is:

A siding structure comprising: a generally vertical support wall structure; a plurality of siding panels on the outer surface of said wall structure; each of said siding panels being provided with a recess on its lower portion having a transverse portion and a longitudinal portion; said transverse wall portion being provided with a slot; a siding fastener attached to said wall structure supporting said siding panels; said siding fastener being provided with a recess having a transverse portion and a longitudinal portion complementary with said recess in the lower portion of said siding panels; said transverse portion of said recess in said fastener being provided with a slot; a metal spline secured in said slot in said transverse portion of said siding fastener and extending into said slot in said transverse portion of said recess in the lower portion of said siding panels; said siding fastener being provided with a recess formed on the lower interior portion thereof provided with a transverse portion and a longitudinal portion; said recess receiving the upper end of the next lower siding panel to hold the same adjacent the wall structure; said longitudinal portion and transverse portion of said recess being of a dimension to provide a space above the end of the next lower siding panel of from ⅛" to ¼" to allow for expansion and contraction of said next lower siding.

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