United States Patent [19]

Mattes

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[54] **BUILDING SIDING UNIT WITH INTERLOCKING BACKING BOARD AND OUTER PANEL**

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[*] Notice: The portion of the term of this patent subsequent to Nov. 28, 1989, has been disclaimed.

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[52] **U.S. Cl.** **52/550,** 52/531, 52/542, 52/549

[51] **Int. Cl.** **E04b 2/08,** E04c 2/46

[58] **Field of Search** 52/542, 519, 543, 52/544–547, 549, 550, 530, 531, 536, 529, 520, 522

[56] **References Cited**

UNITED STATES PATENTS

3,703,795	11/1972	Mattes	52/521
3,485,004	12/1969	Mattes	52/520
3,158,960	12/1964	Newton et al.	52/522
2,438,099	3/1948	Whitehouse	52/550
2,264,546	12/1941	Ochs	52/529
3,520,099	7/1970	Mattes	52/531
3,380,215	4/1968	Schaefer et al.	52/549
2,292,984	8/1942	Alvarez	52/546
2,820,257	1/1958	Newton	52/530
1,963,583	6/1934	Jenkins	52/556

FOREIGN PATENTS OR APPLICATIONS

643,327	6/1960	Canada	52/519

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[57] **ABSTRACT**

A siding unit for a building or like structure which includes an outer panel and a backing board. The outer panel of the siding unit includes a hook-shaped butt portion which is adapted to interlock with the siding unit in the lower adjacent siding course. The outer panel also includes a rearwardly extending downturned hook part at its upper marginal portion which is fitted over and interlocks with a lip formed in the upper marginal portion of the backing board located at the back of the outer panel.

3 Claims, 2 Drawing Figures

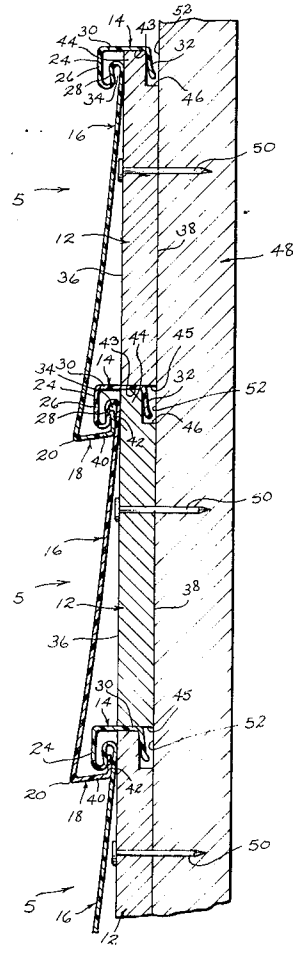


Fig. 1

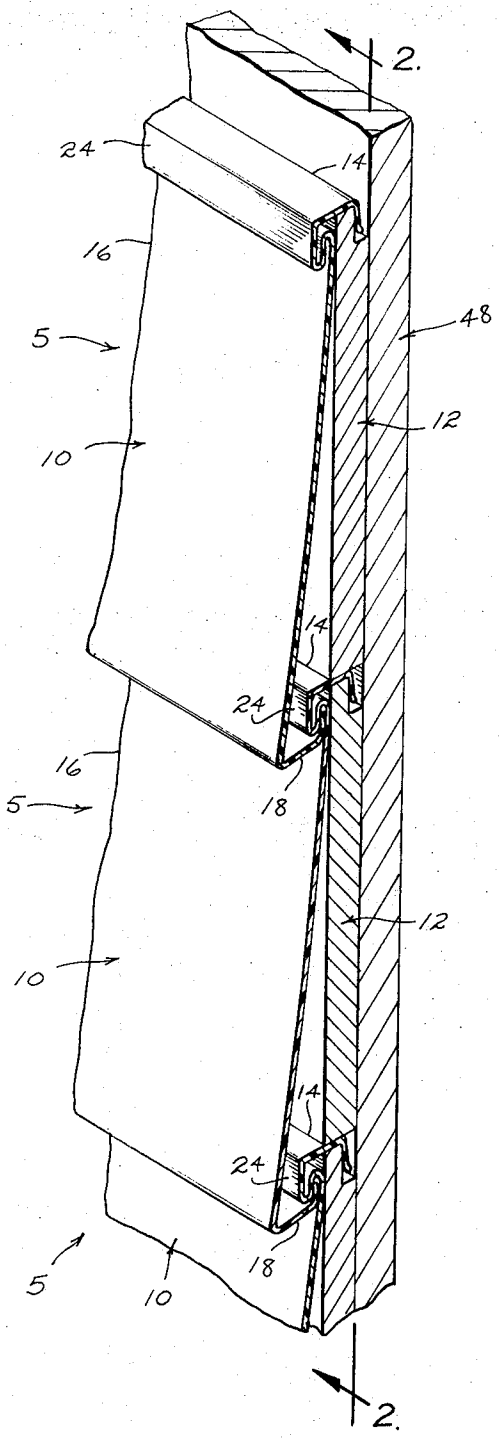
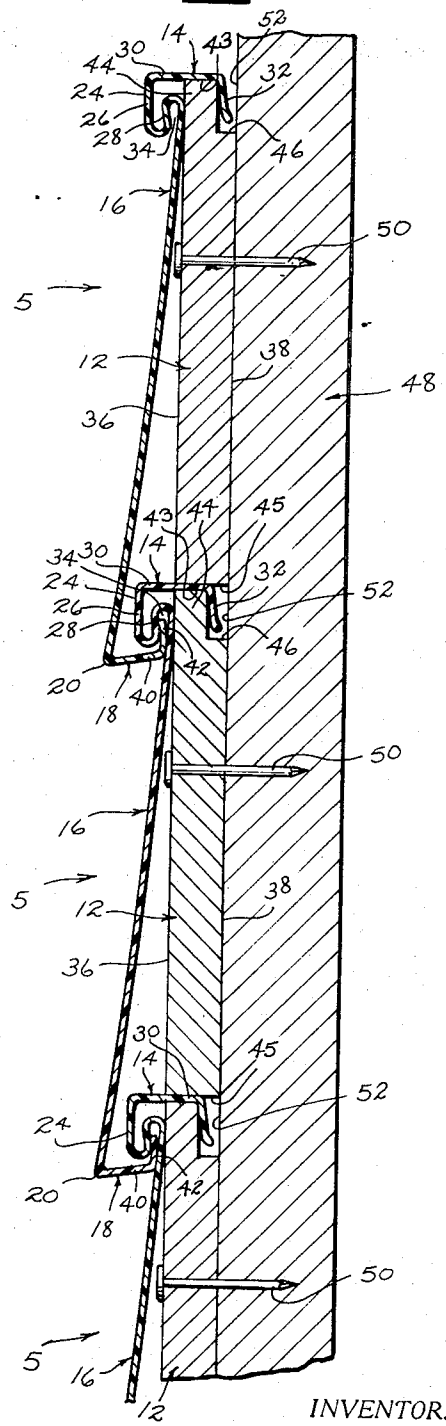


Fig. 2



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BUILDING SIDING UNIT WITH INTERLOCKING BACKING BOARD AND OUTER PANEL

SUMMARY OF THE INVENTION

This invention relates to a siding unit for a building or like structure.

The siding unit of this invention comprises an outer panel and a backing board. The outer panel includes an upper marginal portion having a rearwardly extending downturned hook part and a butt portion formed at the lower edge of the panel. The butt portion includes an upturned lip which interlocks with the outer panel of the siding unit in the lower adjacent course. The backing board has an upper edge which is of a reduced thickness to define a generally vertical lip. The backing board is positioned and secured against the building structure with the lower edge of the board resting upon the outer panel of the siding unit in the lower adjacent siding course. The outer panel of the siding unit is interlocked at its butt portion with the outer panel of the siding unit in the lower adjacent siding course and swung upwardly and rearwardly against the backing board with the hook part of the panel at its upper marginal portion being snapped over and interlocked with the lip at the upper edge of the backing board. In this manner, the outer panel is mounted to the building structure without the aid of staples, nails or the outer panel or the backing board of the siding unit in the next upper adjacent siding course. The siding units of this invention be be simply and rapidly applied to a building structure by one workman, even in inclement, windy weather.

Accordingly, it is an object of this invention to provide a siding unit for a building or like structure which can be applied by one workman in a simple and rapid manner.

It is another object of this invention to provide a siding unit for a building or like structure which is of economical construction and which can be applied in a simple and rapid manner on inclement and windy days as well as in pleasant weather.

It is a further object of this invention to provide a building siding unit comprising an outer panel and a backing board and in which only the backing board is fixedly secured to the underlying building structure.

Still another object of this invention is to provide a method for attaching siding units to a building structure in which only the backing boards of the units are secured to the structure and the outer panels of the units are slidable relative to their respective backing boards and to each other.

Other objects of this invention will become apparent upon a reading of the invention's description.

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of this invention has been chosen for purposes of illustration and description wherein:

FIG. 1 is a fragmentary perspective view of the siding units shown attached to a building structure.

FIG. 2 is a sectional view of the siding units taken along line 2—2 of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment illustrated is not intended to be exhaustive or to limit the invention to the precise

form disclosed. It is chosen and described in order to best explain the principles of the invention and its application and practical use to thereby enable others skilled in the art to best utilize the invention.

Each siding unit **5** includes an outer panel **10** and a cooperating backing board **12.** Outer panel **10** may be formed by extrusion or from sheet blanks which are shaped by a series of progressing bending or forming dies and may be of a plastic composition, such as polyvinylchloride, or metallic composition, such as aluminum. Backing board **12** is preferably formed of a rigid material such as insulative fiber board or a honeycombed light weight plastic.

Outer panel **10** includes an upper marginal portion **14,** a face portion **16** depending from marginal portion **14,** and a butt portion **18** extending from the lower edge **20** of face portion **16.** Face portion **16** includes an integral retainer part **24** which extends along upper marginal portion **14.** Retainer part **24** preferably comprises a downturned forwardly projecting double-fold extension having an outer run **26** and a spaced inner run **28.** A substantially horizontal flange **30** extends rearwardly from the upper edge of outer run **26** and terminates in a downturned generally vertical lip **32.** Inner run **28** of retainer part **24** in conjunction with face portion **16** defines an inverted channel **34.** web **30** and lip **32** in conjunction with face portion **16** form a hook means. In other constructions of outer panel **10,** retainer part **24** may be in the form of a clip such as that shown in FIG. 3 of U. S. Pat. No. 3,485,004.

Butt portion **18** of outer panel **10** includes a web **40** which extends rearwardly from lower edge **20** of the face portion and which terminates in an upturned and preferably forwardly inclined lip **42.** Lip **42** of the butt portion is adapted to be inserted upwardly into the retainer part channel **34** of an overlapped outer panel **10** of a siding unit in the adjacent lower siding course.

Backing board **12** has a front face **36,** a rear face **38,** an upper edge **43,** and a lower preferably parallel edge **45.** Rear face **38** of the backing board terminates spacedly from upper edge **43** to define a lip portion **44** at the upper edge of the backing board. Lip portion **44** is separated from rear face **38** of the backing board by a shoulder **46.**

To attach a siding unit of this invention to building structure **48,** a backing board **12** is first positioned against structure **48** with its lower edge **45** resting upon web **30** at the upper marginal portion **14** of the outer panel **10** in the lower adjacent siding course. Nails **50,** or similar securement means, are then driven through backing board **12** and into building structure **48** to anchor the backing board to the building structure. An outer panel **10** is then grasped by the workman with the butt portion **18** of the panel positioned below retainer part **24** and preferably against face portion **16** of the outer panel **10** of the siding unit in the lower adjacent course. The grasped panel is then slid upwardly causing lip **42** of its butt portion to be received within channel **34** of retainer part **24** of the outer panel **10** in the lower adjacent siding unit and slidably interlocked with the lower siding unit. With butt portion **18** of outer panel **10** so interlocked with the lower adjacent siding unit, the upper marginal portion **14** and face portion **16** of the outer panel is swung rearwardly against backing board **12** with lip **32** of the hook means at the upper marginal portion **14** of the panel being flexed upwardly and snapped downwardly over lip portion **44** of the

backing board **12.** With lip **32** of the outer panel located between lip portion **44** of the backing board and outer face **52** of building structure **48,** the outer panel can be released as it will remain positioned against backing board **12.** Another backing board **12** can now be grasped and positioned against building structure **48** with its lower edge **45** resting upon web **30** of the previously positioned outer panel **10.** The sequence of securing the backing board to the building structure and attaching another panel **10** to the board **12** is repeated as above described until siding of the building structure is completed.

The spacing between face portion **16** at retainer part **24** and lip **32** and the distance between web **30** and the upper edge of butt portion lip **42** of each panel **10** are so related in size to the thickness of lip portion **44** and the width respectively of backing board **12** that each panel **10** fits snugly in position upon its backing board when interlocked with an outer panel **10** in the lower adjacent course but not so tightly so as to prevent movement of the outer panel relative to its backing board and such interlocked outer panel during expansion and contraction of the panels due to atmospheric changes. Lip **32** of each panel **10** may be slightly outturned at its lower edge to facilitate its fit over lip portion **44** of its backing board. To further facilitate attachment of the siding unit of this invention, each backing board may include a lip portion **44** at each of its upper edge **43** and lower edge **45** to enable the workmen attaching the siding to the building structure to reverse the backing board as the siding is being fitted for gables and similar areas where the siding unit must be shortened. The spacing between shoulder **46** and upper edge **43** of each backing board preferably exceeds the width of lip **32** of the outer panel as measured from the lip's lower edge to panel web **30.** Lip portion **44** of backing board **12** is spaced sufficiently from outer surface **52** of the building structure to permit lip **32** of the outer panel to be fitted over and behind the lip portion as shown in FIG. **2.**

It can be seen from the above description that only the backing boards of the siding units of this invention are nailed to the building structure. This permits the outer panels of the siding units which are slidably interlocked together to expand or contract during use without buckling or distortion. Additionally, each of the outer panels of the siding units is positioned and held against the building structure by its backing board.

It is to be understood that the invention is not to be limited to the details herein given but may be modified within the scope of the appended claims.

I claim:

1. A siding unit for a building or like structure comprising an outer panel and a backing board, said outer panel including spaced upper marginal and butt portions and a face portion extending between said upper marginal and butt portions, said upper marginal portion including a web extending rearwardly of said face portion and terminating in a downturned lip spaced from said face portion, retainer means extending along said upper marginal portion, said butt portion extending rearwardly from the lower edge of said face portion and including an upturned lip, said retainer means receiving in slidable interlocking cooperation the upturned lip of the butt portion of a said outer panel in the upper adjacent siding course, said backing board having front and rear faces and upper and lower edges, the rear face of said backing board terminating spacedly from said upper edge of the backing board to define a lip portion of reduced thickness at said upper edge, said backing board resting upon the web of the upper marginal portion of a said outer panel in a lower adjacent siding course and having its rear face positioned against said structure and its front face located in substantially the same plane as the front face of the backing board in the lower adjacent siding course, the lip portion of said first mentioned backing board being spaced from said structure, securement means connecting said first mentioned backing board only to said structure, said first mentioned backing board only contacting said outer panel in the lower adjacent siding course at said web thereof, said first mentioned outer panel having the upturned lip of its butt portion engaged in interlocking cooperation by the retainer means of said outer panel in the lower adjacent siding course, the downturned lip of said first mentioned outer panel fitted over and behind the lip portion of said first mentioned backing board with said web of the first mentioned outer panel overlying the upper edge of said first mentioned backing board, whereby said first mentioned outer panel is retained in position against said structure by said outer panel in the lower adjacent siding course and said first mentioned backing board.

2. The siding unit of claim **1** wherein the width of the lip portion of said first mentioned backing board as measured from the upper edge of said rear face to said upper edge of the backing board exceeds the width of the downturned lip of said first mentioned outer panel.

3. The siding unit of claim **1** wherein said first mentioned face portion, web and downturned lip of said first mentioned outer panel form a hook means fitting slidably over the lip portion of said backing board.

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