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2,948,367

INTERLOCKING SIDING

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This invention relates in general to siding for use on the exterior of buildings and is particularly directed towards interlocking siding panels formed with sealed chambers which provide a high degree of thermal insulation.

A feature of this invention resides in forming within the body of a siding panel one or more longitudinal sealed chambers. These chambers extend throughout the entire length and approximately the entire width of the panel and when applied to the wall of a building effectively insulate the building against heat and cold. The siding and insulation are now complete in one element with no additional insulation material being necessary and therefore greatly reducing building costs.

The panel may be advantageously made from extruded plastic which is both inexpensive to manufacture and light in weight. This eliminates problems of corrosion, rotting and pitting and requires a minimum amount of maintenance once installed.

Another feature of this invention lies in a novel means for interlocking a series of adjacent panels one with another. By fabricating the panels with longitudinal channels on opposite sides and along either margin, adjoining panels may be interlocked to produce an additional sealed chamber further to increase the insulating qualities of the panel.

A general object of the invention is to provide an improved siding panel for use in building construction.

Another object is to provide a siding panel displaying thermal insulating properties.

Another object is to provide a light weight, long wearing siding panel that is both inexpensive to manufacture and easy to install.

These and other objects and features of this invention will more readily appear from a detailed description of a preferred embodiment thereof, reference being made to the accompanying drawing in which:

Fig. 1 is a perspective view of a length of siding panel made in accordance with my invention,

Fig. 2 is a view in end elevation, partly in section, of a siding panel and a starting strip as installed on the building exterior,

Fig. 3 is a view similar to Fig. 2 showing a modification of the invention.

As herein shown reference character 10 generally indicates a siding panel of rectangular shape and of any desired length. The panel is preferably extruded of aluminum alloy, plastic composition or similar material, but may also be advantageously fabricated from sheet metal.

The panel may be described as having an inner wall 12 and an outer wall 14 separated and supported by longitudinal ribs or struts 16 and 18 but converging along their upper longitudinal margins to define a pair of sealed insulating chambers 20 and 22, the upper of which being triangular in cross-section while in similar section the lower chamber 22 is trapezoidal. Near the upper longitudinal edge of the panel a series of punch

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marks or apertures 34 is made to accommodate nails 36 for securing the panel to a surface. Only one row of nails is necessary to secure the panel firmly to the wall in view of the interlocking arrangement which will now be described.

On the face of the panel 10 and along its upper margin is formed a downwardly turned flange 24 defining a longitudinal groove or channel 26 for interlocking engagement with an upwardly turned flange 28 defining a channel 30 formed in the lower back margin of the front wall 14.

It will be noticed in Fig. 2 that the interlocking of the upper channel 26 of one panel with the lower channel 30 of another panel creates a third longitudinal chamber 32 enclosed by the rib 18, the channel 30, the front wall 14, and the side of the building to which the panel is fastened. This third chamber 32 further increases the insulating characteristics of the panel and a building faced with panels of this sort will be surrounded by trapped pockets of air which offer excellent insulation. Further, the manner in which one panel interlocks with another provides a snug barrier against wind and rain and cannot be torn loose by wind storms.

A modification of the siding panel is shown in Fig. 3. In this instance the lower channel 30 and the rib 18 have been brought closer together so that when one panel is assembled over another the rib 18 will bear against and be supported by the top edge of the lower panel. This not only fully encloses the chamber 32 but also makes installation of the panel an easy task.

When a panel is being installed, its lower channel 30 is engaged with the upper channel 26 of another panel already nailed into place. As shown by the broken lines in Fig. 3, the panel being installed is first hooked under the flange 24 and then rocked about its lower margin and pushed inwardly flat against the building wall. The panel is now fully in position and need only be secured by nails 36 to the wall. There is no need to hold the panel in position until nails can be applied since the panel below fully supports the one being installed above and in its correct position.

Since the siding panels are usually installed one over another by working from the base of the wall upwardly, a starting strip 38 may be used to anchor the lower end of the lowermost panel. This strip matches the top portion of the panel and preferably extends along the entire length of the bottom panel.

In association with the siding panels above described, I employ closed rectangular corner sections or trim sections that may be secured in place along corners of the building or about door and window frames and secured in place by a perforated flange extension of one face. The ends of the panels are cut square and abutted against these corner or trim sections.

Having thus disclosed my invention and described a preferred embodiment thereof, I claim as new and desire to secure by Letters Patent:

1. An assembly of siding elements for buildings, each siding element comprising an elongated panel having an outer and an inner wall converging together and connected along their upper margins, a longitudinal rib joining the lower portion of said inner wall with said outer wall and defining in the panel a sealed longitudinal thermal-insulating chamber triangular in cross section, a downwardly facing channel formed lengthwise on the outer face and adjacent the upper margin of said panel for interlocking with the lower portion of another panel of similar construction, an upwardly facing channel formed lengthwise on the inner face and along the lower margin of said panel interlocking with the upper portion of an adjacent panel of similar construction and forming therewith an additional thermal-insulating chamber,

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the upper margin of said panel bearing against the longitudinal rib of an adjacent panel to support said adjacent panel in positive fixed relation thereto.

2. An assembly of siding elements for buildings, each siding element comprising an elongated panel having an outer and an inner wall converging together and connected along their upper margins, a lower longitudinal rib joining the lower portion of said inner wall with said outer wall, an intermediate longitudinal rib joining the mid-portion of said inner wall with said outer wall and defining in the panel two sealed longitudinal thermal-insulating voids arranged one above the other, the uppermost of said voids being triangular in cross section and the lowermost void being trapezoidal in cross section, a downwardly facing channel formed lengthwise on the outer face and adjacent the upper margin of said panel interlocking with the lower portion of another panel of

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similar construction, an upwardly facing channel formed lengthwise on the inner face and along the lower margin of said panel interlocking with the upper portion of an adjacent panel of similar construction and forming therewith an additional thermal-insulating void, the upper margin of said panel bearing against the lower longitudinal rib of an adjacent panel to support said adjacent panel in positive fixed relation thereto.

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