Dec. 1, 1964 L. J. NEWTON ETAL 3,158,960

SIDING PANELS

Filed Sept. 22, 1961

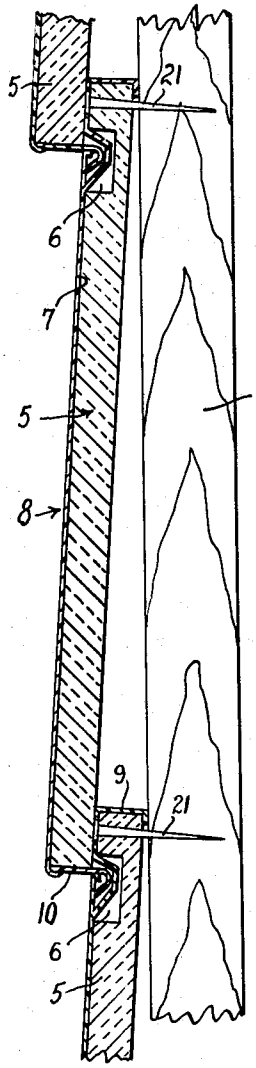


Fig. 1

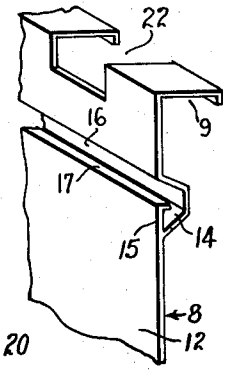


Fig. 5

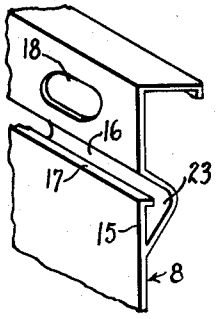


Fig. 6

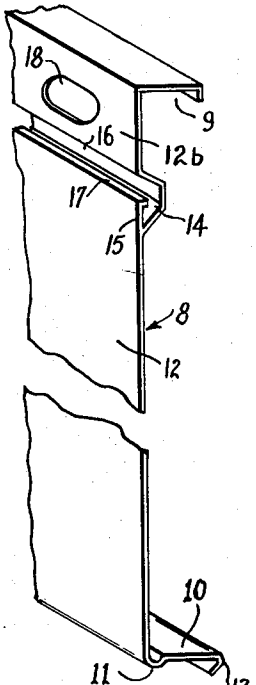


Fig. 2

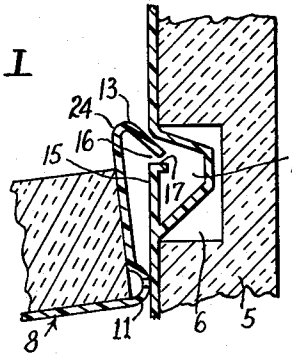


Fig. 3

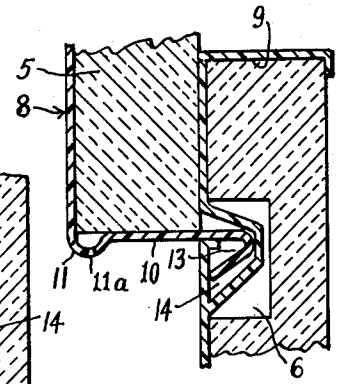


Fig. 4

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SIDING PANELS

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This invention relates to siding panels for buildings and the like and particularly to coverings for such siding panels which have provision for interlocking with the cover of adjacent longitudinal courses of panels and which are of weather and wear resistant material and which will not become loose or baggy under varying weather conditions.

The invention consists essentially in the provision of a weather and wear resistant cover which can readily be clipped on to the outward face and top and bottom horizontal edges of siding panels of insulating material such as fibre-board or wood, or other types of panels manufactured from wood or cellular plastics without the use of additional securing means. The weather and wear resistant covering for the siding panels is preferably extruded or post formed from a plastic material which will stand up to extreme variations in temperature and be highly resistant to wear etc. However, it is to be understood that the panel cover can be made of any other type of material which will have the desired characteristics, such as lightweight metal. Each panel covering is formed to fit snugly over one face and over the top and bottom horizontal edges of the panel, and is provided with a locking lip extending the full length of its lower horizontal edge and with a horizontal locking recess adjacent the top horizontal edge of the panel, the locking lip of one panel cover adapted to engage with and form a spring tension lock with the locking recess of the panel cover of the course of panels immediately below to provide a weathertight seal and to ensure that the covers lie smooth and flat on the underlying panels, and is held tightly at all times against the underlying panel. The invention is further characterized in that the covers are provided with cut-out portions along their upper horizontal edges to enable the siding panels to be secured to a wall without the securing means penetrating the cover.

The primary object of the invention is to provide a cover for wall siding panels which can be fitted to the panel without additional securing means.

A further object of the invention is to provide a panel cover which is spring held in interlocking engagement with the covers of adjacent courses of panels.

A further object of the invention is to provide a cover for siding panels in which the spring interlock between adjacent courses forms a weathertight seal.

A further object of the invention is to provide a building siding which will be weather and wear resistant under the most severe conditions.

A further object of the invention is to provide a building siding in which a cover panel is combined with an insulating siding panel to form a rigid, self-sealing structure having a high insulating value.

A further object of the invention is to provide a cover for wall siding panels which is free to expand relative to the underlying siding panel and therefore will maintain a flat and unwrinkled appearance under varying weather conditions such as temperature etc.

These and other objects of the invention will be apparent from the following detailed specification and from the accompanying drawings, in which:

FIG. 1 is a vertical section of a portion of a wall structure showing one complete course of a wall panel with its weather and wear resistant covering and fitted in place with the adjacent upper and lower courses.

FIG. 2 is a perspective view of one end of the panel cover before being applied to a wall panel.

FIG. 3 is an enlarged sectional view of the upper portion of one panel and the lower portion of the next upper course, with the latter being shown in position before being engaged in weather proof locking engagement therewith.

FIG. 4 is a view similar to FIG. 3 but showing the two panels in locking engagement with each other as in FIG. 1.

FIG. 5 is a partial perspective view of the top portion of a panel similar to FIG. 2 but showing an alternative nailing cut-out.

FIG. 6 is a partial perspective view of the top portion of a panel similar to FIG. 2 but showing an alternative form of interlocking slot.

Referring to the drawings, the panels 5 may be of any type of insulating material such as fibre-board or wood or other boards manufactured from wood of cellular plastics, and are provided with a longitudinal slot or recess 6 on their front face 7, the slot 6 being located near the upper horizontal edge of the panel and in line with the position taken by the lower edge of the panel in the next above course.

Each panel 5 is provided with a weather-proof and wear resistant covering 8 which is preferably made of a plastic material as an extrusion or by a post forming operation, but could be made of light-weight metal. The covering 8 is formed with a channel 9 at its top horizontal edge, with the channel being located to the rear face of the covering, for engagement with the top horizontal edge of the panel 5. The lower horizontal edge of the covering 8 is projected rearwardly at 10 and has a drip bead 11 formed on the projection adjacent the front face 12 of the covering, the bead 11 acting as a spring tension device to maintain contact of the portion 10 of the covering against the adjacent edge of the siding panel. The projection 10 terminates in a downwardly and forwardly projected spring locking member 13 located rearwardly of the rear face of the panel 5. The drip bead 11 may be provided with perforations 11*a* to allow for both moisture vapour and liquid water to escape from the completed wall structure.

Each panel cover 8 is provided with a longitudinally disposed trapezoidal shaped locking recess 14 extending the full length of the cover and adapted to seat within the recess 6 of the panel 5 with the open portion of the trapezoidal recess facing on the front vertical face 12 of the cover. A lip 15 projects vertically upwards from the lower horizontal edge of the trapezoidal recess 14 in the plane of the front face 12 of the cover. This lip 15 projects upwards to within a short distance of the upper horizontal edge of the recess 14 to provide a longitudinal entrance slot 16 through which the locking member 13 of the panel in the next above course is projected into the trapezoidal slot to engage with the walls thereof and with the said lip to provide a pressure weatherproof seal between the courses of panels. The top edge of the lip 15 is projected rearwardly at 17 to reinforce the edge of the lip and to provide a shoulder behind which the locking member 13 is held in spring sealing engagement.

That portion of the cover 8 located above the locking recess 14 and designated 12*b* is provided with a series of longitudinally disposed slots 18 along the length of the cover to permit nailing of the panel board 5 to the wall structure 20 without the nails 21 passing through the cover 8. By nailing directly through the panel, the relatively pliable cover 8 is not distorted or drawn by the nail head.

In FIG. 5 an alternative method of permitting nailing of the board 5 to the wall structure 20, is shown. In this form a series of slots 22 are cut through the channel portion 9 at the top horizontal edge of the cover 8.

In FIG. 6 an alternative shape of the locking recess 14 is shown. In this form the slot is of rounded V shape with the rounded portion 23 conforming generally to the rounded portion 24 of the locking member 13 which engages in the locking recess 14.

The rounded portion 23 of the recess 14 provides a spring tension device which, when engaged by the locking member 13 of the adjacent panel cover, will prevent the covers from becoming loose and baggy under varying temperature conditions.

The cover 8, by means of its top longitudinally disposed channel, its locking recess 14 and its rearwardly projecting lower horizontal edge 10 can be securely fitted to the wall panels 5 at any time before installing the panels 5 on a wall surface and can be held thereon without additional securing means. The lower horizontal edge 10 of the cover provides the necessary degree of spring friction required to hold the cover on the panel.

In applying the covered boards to the wall structure 20, a first course of panels is applied and secured by the nails 21. The second course of panels is then applied as follows. Each panel is held in a generally horizontal position relative to the first applied course as shown in FIG. 3. The locking member 13 is then pushed through the slot 16 into the trapezoidal shaped recess 14 and the panel is then pushed upwards and towards the wall structure 20 and is then nailed in place. When the panel is pushed upwards, its lower end makes a solid overlapping contact with the upper end of the covered panel below and the locking member 13 forms a weathertight seal within the recess 14 and behind the lip 15 as shown in FIG. 4. The panel is then secured to the wall structure 20 by the nails 21 which are driven home without contact with the cover 8.

The interlocking of the two panels has the effect of holding the cover 8 solidly and firmly on its panel 5 without drawing or distortion and the initial smooth appearance of the cover is thereby maintained. Furthermore, as the covers are held on their panels by spring tension and not by rigid securing means such as nails etc., they are free to move in all directions without being placed under stress when affected by varying temperature conditions.

What we claim is:

1. A building siding in combination, a wall structure, a series of laterally extending insulating siding panels secured to said wall structure in lapped engagement with each other in courses one above the other, each of said siding panels having a longitudinal recess on the face thereof opposite to said wall structure, the said longitudinal recesses being located a short distance downwards from the top horizontal edge of the panels, and a cover for each of said siding panels, each of said covers having a panel engaging channel disposed longitudinally along the top horizontal edge thereof and engaging with the top horizontal edge of the panel being covered, a longitudinal locking recess in the face of each cover opposite from the said wall structure and fitting into the recess of the siding panel being covered, a lip in the lower portion of the said locking recess, the said lip projecting upwards from the lower portion of the locking recess in the vertical plane of the cover, the said lip defining the

lower horizontal edge of a restricted entrance to the said locking recess, the bottom horizontal edge of the covers being bent rearwardly and extending beyond the thickness of the said siding panels and being bent downwardly and forwardly to form a locking member in spring tension engagement with the lip in the longitudinal recess of the cover of the siding panel in the course immediately below.

2. A building siding as set forth in claim 1, in which the said lip has its horizontally disposed edge bent inwardly to form a shoulder projecting into the said locking recess to narrow the horizontal depth of the locking recess in relation to the forward extension of the cover locking member.

3. A building siding as set forth in claim 1, in which a bead formed at the lower horizontal edge of the cover form a spring holding the said locking member in its defined position against the lower edge of the covered panel and within the locking recess of the cover immediately below.

4. A building siding as set forth in claim 1, in which the upper portion of the cover above the said locking recess is provided with a series of nailing slots larger in size than the head of the nail to be used.

5. A building siding as set forth in claim 3, in which the said bead has a series of perforations providing moisture drainage openings.

6. In a building siding as set forth in claim 1 in which the longitudinal locking recess is trapezoidal shaped in section.

7. In a building siding as set forth in claim 1 in which the said locking member of one panel cover contacts the walls and lip defining the locking recess of the panel in the course immediately below to form a pressure weathertight seal therewith.

8. In a building siding as set forth in claim 1 in which the said cover, in the area above said locking recess, is slotted to expose the said siding panel to permit the nailing of the siding panel directly to the wall structure independently of the said cover.

9. A panel as set forth in claim 1 in which a bead at the lower horizontal edge of the cover forms a spring holding the said locking member in its defined position.

10. A panel as set forth in claim 1 in which the upper portion of the cover above the said locking recess is provided with a series of nailing slots larger in size than the head of the nail to be used.

11. A panel as set forth in claim 9 in which the said bead has a series of perforations providing moisture drainage openings.

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