Nov. 23, 1965 L. MARTIN 3,218,772

METAL CLAPBOARD SIDING FOR BUILDINGS

Filed Dec. 31, 1962 2 Sheets-Sheet 1

FIG-1

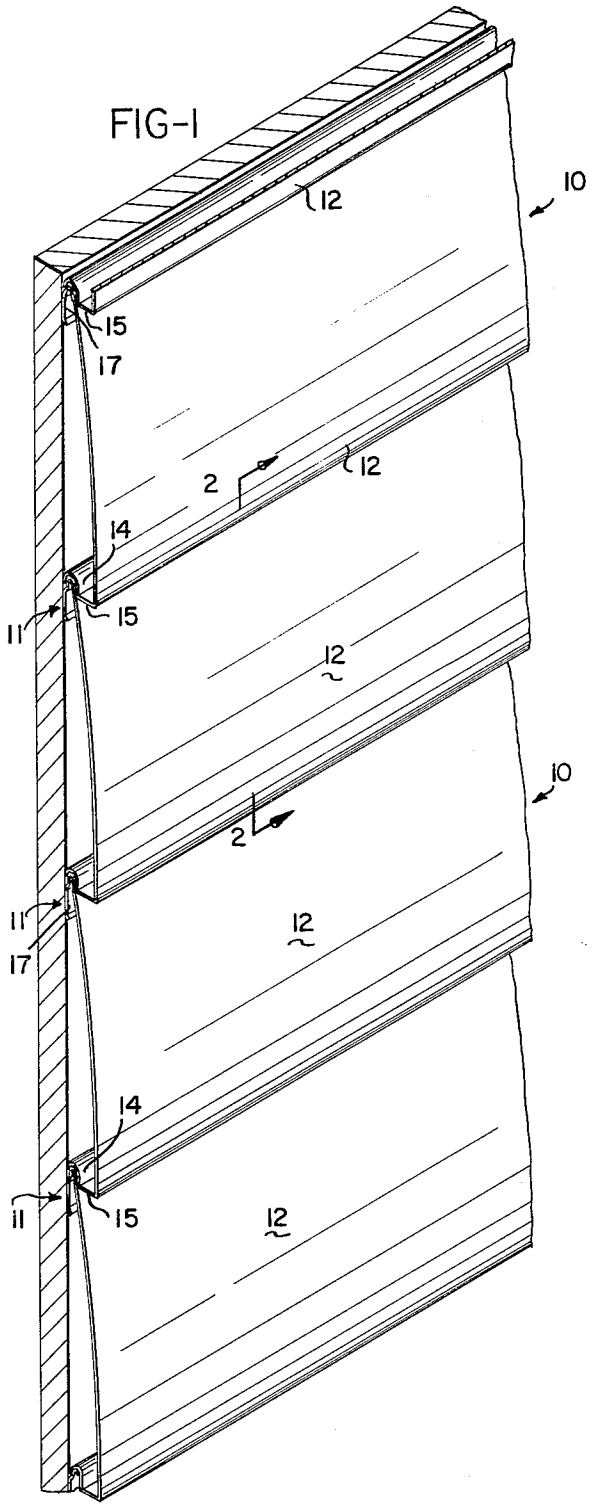
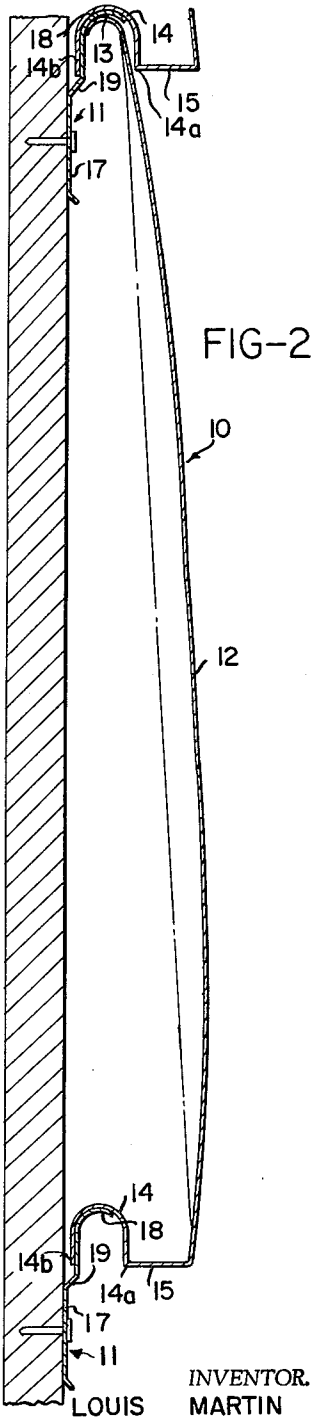


FIG-2



INVENTOR.
LOUIS MARTIN

BY
MAHONEY, MILLER & RAMBO

William V. Miller

Nov. 23, 1965 L. MARTIN 3,218,772

METAL CLAPBOARD SIDING FOR BUILDINGS

Filed Dec. 31, 1962 2 Sheets-Sheet 2

FIG-3

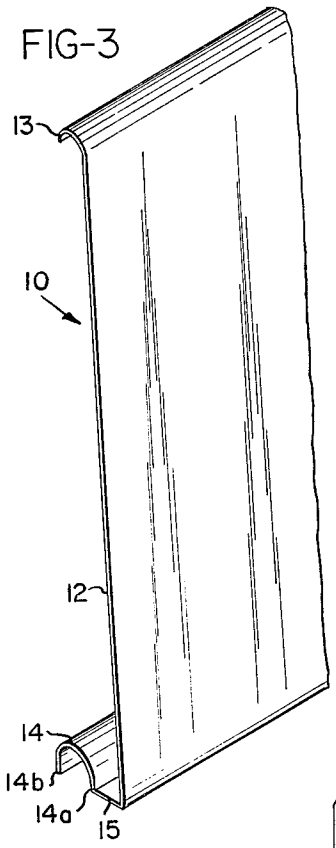
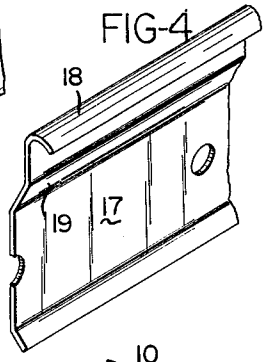


FIG-4



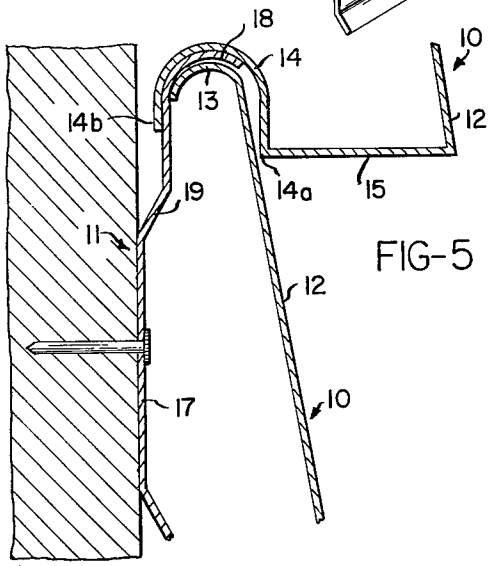
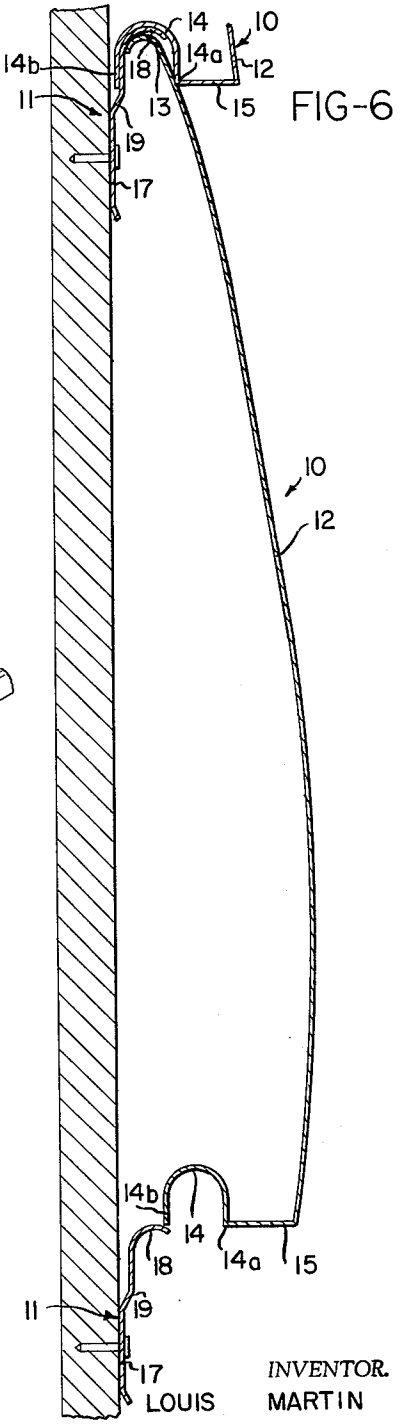


FIG-5

FIG-6



INVENTOR.
LOUIS MARTIN

BY
MAHONEY, MILLER & RAMBO

William V. Miller

United States Patent Office 3,218,772 Patented Nov. 23, 1965

3,218,772

METAL CLAPBOARD SIDING FOR BUILDINGS

Louis Martin, Columbus, Ohio, assignor to Rollon Corporation, Columbus, Ohio, a corporation of Ohio

Filed Dec. 31, 1962, Ser. No. 248,401
8 Claims. (Cl. 52—508)

My invention relates to metal clapboard siding for buildings and is a continuation-in-part of my application Serial No. 222,543 filed September 10, 1962, and now abandoned. It has to do, more particularly, with metal clapboard siding for buildings in the form of elongated siding strips adapted to be horizontally disposed in cooperation with attaching strips secured to the building and with which the respective upper and lower edges of the siding strips interlock. According to my invention, each siding strip and the associated attaching strips are made of sheet metal, preferably aluminum, of novel cross-sectional form to permit a novel manner of application resulting in a surface covering which is completely watertight as well as pleasing in appearance, especially in that each applied siding strip is free of all waves, ripples and distortions which would detract from its appearance.

The present invention is directed mainly to the combination of siding strips or panels and associated attaching strips. The attaching strips are nailed to the building in vertically spaced horizontal relationship and the siding panels interlock therewith both at the top and the bottom edges of the panel. No nails or staples extend through the panels for securing them to the building. The edges of the panels interlock with the associated upper and lower attaching strips so that any panel, if damaged, can be removed and replaced without disturbing any panel above or below it. The arrangement of attaching strips and associated interlocking panels according to this invention simplifies application of the siding and assures perfect alignment and the application can be by unskilled labor. In addition, according to this invention, the attaching strips and the panels are so designed that when the strips are properly applied and the panels are interlocked therewith, a bending force is created at the upper and lower edge of each panel which causes an outward bowing of the panel relative to the building surface. This bowing removes or erases all ripples, waves and distortions which might be created in the surface of the panel in forming or handling the strip. This outward bowing creates a convex surface which is very pleasing in appearance, and causes the siding to stand out aesthetically to a greater degree than the usual straight siding panel. Furthermore, the outward bowing of the panel facilitates the removal of the panel if that ever becomes necessary.

Various other objects and advantages will be apparent from the drawings and the following description.

In the accompanying drawings, I have illustrated an example of my invention but it is to be understood that variations thereof may be made without departing from the basic principles of my invention.

In the drawings:

FIGURE 1 is a perspective view of a fragment of a wall structure to which the siding of my invention has been applied.

FIGURE 2 is an enlarged vertical sectional view taken along line 2—2 of FIGURE 1 showing one panel of siding and the associated attaching strips at its upper and lower edges.

FIGURE 3 is a perspective view of a portion of one of the siding panels.

FIGURE 4 is a perspective view of a portion of one of the attaching strips.

FIGURE 5 is an enlarged sectional detail showing the cross-sectional shape of the attaching strip and the associated interlocking lower edge of an adjacent upper panel and the associated interfitting upper edge of an adjacent lower panel.

FIGURE 6 is a vertical sectional view similar to FIGURE 2 but showing how one of the panels can have its lower edge lifted off the associated upper edge of the adjacent lower attaching strip to permit removal and replacement of the panel.

In general, as indicated in the drawings, I provide a siding strip 10 and cooperating attaching strips 11. These members cooperate and interfit with each other. The attaching strips are adapted to be nailed, stapled or otherwise attached to the building surface and the siding strips are adapted to be mounted on the associated strips so as to be held on the building without passing nails or staples through the siding.

The siding strip comprises a main body or panel 12 which has at its upper longitudinal margin a continuous curved lip 13 of hook-form which extends rearwardly from the plane of the panel. At the lower longitudinal margin of the panel there is an inverted U-shape channel formation 14 behind the plane of the panel which is attached thereto by an attaching flange 15 which extends rearwardly or inwardly from the lower margin of the panel and is at an acute angle relative thereto. This flange 15 connects to the outer or forward leg of the channel portion 14 which extends downwardly to a greater extent at the point indicated at 14*a* than the inner or rear leg which terminates at the point 14*b*. It will be noted that the hook 13 is of a width forwardly and rearwardly of the panel 12 which is slightly less than the corresponding dimension of the inverted U-shaped channel 14. The attaching flange 15 extending between the inverted channel 14 and the panel 12 is of selected extent to space the lower margin of the panel outwardly from the building surface a distance sufficiently greater than the spacing of the upper panel margin from the building surface to cant the panel outwardly from top to bottom edges to give it a clapboard effect.

The strip 11 may be of suitable cross-sectional form to include a flat wall-surface contacting body section 17 which is adapted to be nailed or stapled flat to that surface. This body section has at its upper edge a hook-receiving curved lip 18 which is turned outwardly. This portion 18 is spaced outwardly from the body section 17 by means of an attaching angular bend 19. Thus, the hook-receiving portion 18 will be spaced outwardly from the building surface when the body section 17 is in flat contact therewith. It will be noted from FIGURE 5 that the hook or curve of the portion 18 is relatively shallow as compared to the hook 13 which is to be inserted upwardly therewithin and as compared to the deep inverted channel portion 14 which is adapted to the slipped over the portion 18. The portion 18 is at its lower side complemental to the hook 13 so as to snugly receive it and at its upper side is complemental to the channel portion 14 so that it will fit snugly thereover.

According to this invention, the siding may be applied from the top down or the bottom up on the building surface or wall as desired. In applying the siding, one of the securing or attaching strips 11 is first nailed to the building surface in the position indicated in FIGURE 5. Then the next securing strip 11 is nailed to the building surface in vertically spaced relationship to the first strip and in parallel relationship thereto. It is a simple matter to nail the strips to the surface and to level them and space them vertically properly. This can be done by unskilled labor. The adjacent strips are spaced vertically a predetermined distance so that when the siding is mounted thereon, the panel thereof is bowed as indicated in full lines in FIGURE 2. The normal unbowed condition of

this panel is illustrated by dotted lines in this figure. The spacing of the strips is such that the vertical distance between the hook-receiving lip portions **18** of the two adjacent strips is less than the normal distance between the hook **13** and hook-receiving channel portion **14** of the panel which is to be mounted thereon. Thus, to slip the hook **13** into the portion **18** of the upper attaching strip and then to slip the channel portion **14** over the portion **18** of the lower attaching strip requires a slight outward bowing of the panel **12** which gives the desired convex effect and eliminates all ripples, waves, distortions, etc.

The application of the siding continues merely by securing additional attaching strips **11** to the building surface in proper vertically spaced relationship, inserting the hook **13** of each successive siding strip back under the hookreceiving portion **18** of the adjacent upper attaching strip **11**, and bowing the panel **12** of that siding strip to permit hooking of the lower edge **14** thereof on the portion **18** of the adjacent lower attaching strip **11**.

Anytime it is necessary to remove one of the siding strips, this can be done, as indicated in FIGURE 6, by pressing upwardly with the fingers on the connecting flange **15** of that strip to bow the panel **12** sufficiently to release the bottom edge of that panel from the associated lower attaching strip. Then the upper edge of the siding panel can be slipped downwardly from the cooperating upper attaching strip. It will be noted that the portion **18** is relatively shallow to facilitate removal of the hook portion **13**. The hook **13** is not as shallow as the portion **18** but both are much more shallow than the inverted channel portion **14**.

It will be apparent that this inventiton provides a combination of siding strips and attaching or securing strips which make it possible for unskilled labor to accurately apply the panels. It is not necessary to pass nails or staples through the siding strip itself. Any panel, if damaged, may, therefore, be removed and be replaced without disturbing any panel above or below the one being removed. Furthermore, panels can be removed readily for inspection purposes such as to check on whether or not there are termites, etc. in the underlying wall surface. Due to the cross-sectional shape of the panel edges and the associated securing strip edges with which they interlock, in the application of the siding, perfect alignment can be obtained with ease and with unskilled labor.

Various other advantages will be apparent.

Having thus described my invention, what I claim is:

1. In a building structure having a vertical wall surface, a plurality of horizontally disposed siding strips mounted on horizontally disposed, vertically spaced and parallel securing strips which are fastened to said wall surface, each of said securing strips having a body which engages said wall surface when the strip is fastened thereto and having an angular attaching bend extending upwardly and outwardly from said body to a downturned hook-receiving lip which is spaced outwardly of said body and has a convex upper surface and a concave lower surface, each of said siding strips comprising a panel with an inwardly extending downturned hook portion on its upper edge which is provided with a convex upper surface and a concave lower surface which is complemental to and is disposed within said hook-receiving lip of the next higher adjacent securing strip, said panel having an inverted U-shaped channel portion on its lower edge which has a convex upper surface and a concave lower surface and which is complemental to and is disposed over the hook-receiving lip of the next lower adjacent securing strip.

2. The combination of claim **1** in which the channel portion at the lower edge of the panel is joined to the panel by an outwardly extending attaching flange which positions the panel in a downwardly outwardly canted position when the siding strip is mounted on the two adjacent cooperating securing strips.

3. The combination of claim **2** in which the channel portion has inner and outer legs with the outer leg of greater extent downwardly than the inner leg and having its extremity joined to said attaching flange at a level lower than the lower extremity of the inner leg.

4. The combination of claim **3** in which the channel portion is of much greater depth than the hook-receiving lip portion and the hook portion which are relatively shallow.

5. The combination of claim **1** in which the vertical spacing of said securing strips on the building wall surface is such that the vertical distance between the hook-receiving lips of the two adjacent securing strips is less than the normal distance between the hook portion on the upper edge of the panel and the channel portion on the lower edge of the panel to bow outwardly the panel mounted on said strips to form a convex surface thereon extending horizontally and longitudinally of the panel.

6. In a building structure having a vertical wall surface, a plurality of horizontally disposed siding strips on said wall surface, means securing said siding strips to said wall surface in horizontal positions and in vertical contiguous relationship with adjacent edges interfitting, said means comprising securing members disposed on said wall surface at vertically spaced positions, each of said securing members comprising an upwardly and outwardly extending portion which has a downturned hook-receiving lip at its upper and outer extremity which is spaced outwardly of said wall surface and has a convex upper surface and a concave lower surface, each of said siding strips comprising a panel with an inwardly extending downturned hook portion on its upper edge which is provided with a convex upper surface and a concave lower surface which is complemental to and is disposed within said hook-receiving lip of the next higher adjacent securing member, said panel having an inverted U-shaped channel portion on its lower edge which has a convex upper surface and a concave lower surface and which is complemental to and is disposed over the hook-receiving lip of the next lower adjacent securing member.

7. The combination of claim **6** in which the vertical spacing of said securing members on the building wall surface is such that the vertical distance between the hook-receiving lips of the two adjacent securing members is less than the normal distance between the hook portion on the upper edge of the panel and the channel portion on the lower edge of the panel to bow outwardly the panel mounted on said securing members to form a convex surface thereon extending horizontally and longitudinally of the panel.

8. In a building structure having a vertical wall surface, a plurality of horizontally disposed siding strips on said wall surface, means securing said siding strips to said wall surface in horizontal positions and with their adjacent upper and lower edges contiguous, said means comprising securing members disposed on said wall surface at vertically spaced positions and having attaching portions for interfitting with adjacent edges of said siding strips, the vertical spacing of said securing members on the building wall surface being such that the attaching portions of the two adjacent securing members are spaced vertically a distance less than the normal distance between the upper and lower edges of the panel to bow outwardly the panel mounted on said securing members to form a convex surface thereon extending horizontally and longitudinally of the panel.

References Cited by the Examiner

UNITED STATES PATENTS

2,642,968	6/1953	Roush et al.	50—218
2,782,888	2/1957	Rodenbaugh	50—230

FOREIGN PATENTS

739,468 10/1955 Great Britain.

EARL J. WITMER, *Primary Examiner.*

JACOB SHAPIRO, *Examiner.*