Jan. 15, 1957 C. O. ROEBUCK 2,777,549

REINFORCED SIDING MATERIAL OR THE LIKE

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FIG. 1

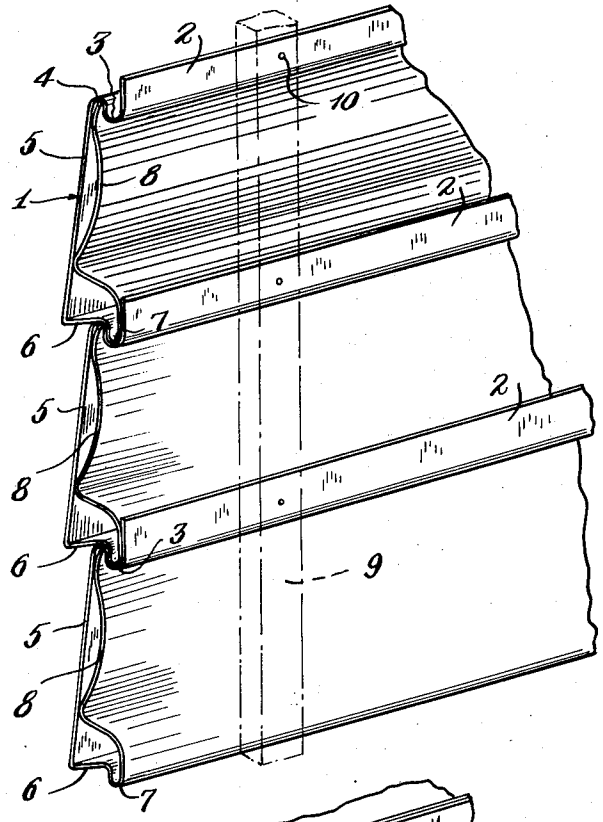
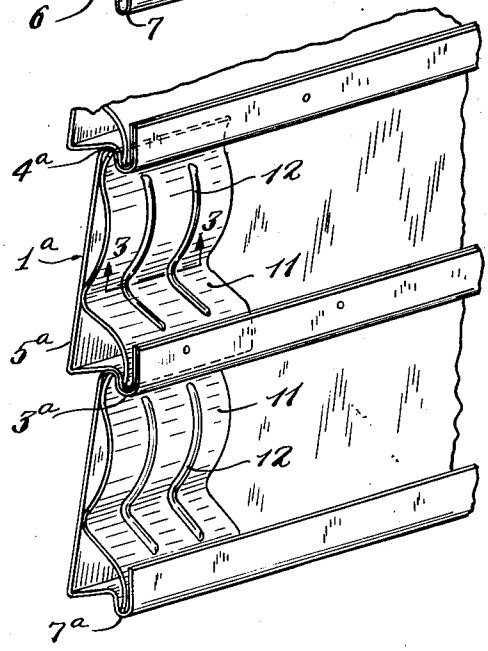


FIG. 2



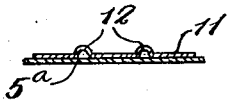


FIG. 3

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REINFORCED SIDING MATERIAL OR THE LIKE

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9 Claims. (Cl. 189—86)

This invention relates to siding material, or the like, and especially to a reinforced siding material usually made from metal, which siding material can be used for doors, decking, roofing, or other installations, where desired.

In the past, various types of siding material have been proposed. In making siding from metal, prior constructions, insofar as I am aware, have either required the use of relatively heavy gauge, costly, heavy metal sheets for making the siding, or else the siding has been of a relatively thin gauge material and of a resultant weak construction. When making siding from any type of metallic sheet material, it is quite desirable that the siding be quite resistant to deformation both when being assembled and after being assembled so that the attractive, uniform appearance of the siding is not damaged or impaired in any manner.

The general object of the present invention is to provide a novel and improved siding characterized by the special resilient reinforced construction thereof.

Another object of the invention is to provide a metallic siding having an integral reinforcing section in resilient engagement with the exposed surface of the siding at spaced vertical points and with the reinforcing portion of the siding extending the length of the siding.

Another object of the invention is to provide a siding which has a curved corrugated reinforcing strip in resilient engagement with the inner surface of the siding at spaced lateral portions thereof.

Other objects of the invention are to provide a novel type of reinforced siding made from a minimum weight of material, which siding is of a strong, sturdy construction; to provide a new type of a siding which has effective inter-lock means thereon for engaging associated strips of siding; and to provide a siding with reinforcing means having rearwardly extending corrugations therein for strengthening such reinforcing portion of the siding but providing line contact between the reinforcing means and the remainder of the siding.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

For a better understanding of the present invention, reference should be had to the accompanying drawings wherein representative sidings embodying the principles of the invention are shown, and wherein:

Fig. 1 is a perspective view of a plurality of strips of siding of the invention shown in assembled relation with a positioning stud being indicated in association therewith;

Fig. 2 is a perspective view, similar to Fig. 1, of a modification of the siding of the invention; and

Fig. 3 is a fragmentary horizontal section taken on line 3—3 of Fig. 2.

In order to simplify comparison between the accompanying drawings and the specification, corresponding numerals are used to refer to corresponding parts in the drawing and specification.

The present invention, in general, relates to a siding comprising a top edge section, an S-shaped in section top portion connected to the edge section and extending generally normal thereto, with the S-shaped section having a main siding section connected thereto and extending downwardly therefrom, a bottom portion connected to the lower edge of the main section and having a downwardly protruding bottom rib thereon for engaging an S-shaped portion of an adjacent strip of siding, and a resilient reinforcing member extending between said S-shaped top portion and the bottom rib and contacting the main section at vertically spaced portions thereof for reinforcing action thereon.

Usually the siding of the invention is made from a shaped metal strip which can be made from any suitable material including aluminum, steel or other material by conventional forming methods. However, in some instances it may be desirable to make the novel siding of the invention from molded plastic material, or from veneer or plywood, or it could be cut or shaped in some instances from wood, if desired.

While the invention particularly will refer to siding, it will be realized that the material of the invention can be used in covering or making doors, and in roofing or decking, as desired.

Particular attention now is directed to the details of the structure shown in the drawings, and Fig. 1 shows a plurality of strips of siding **1** each of which is made from a unitary shaped metal strip. This metal strip is provided with a top nailing or securing edge section **2** which edge section usually has a straight, flat surface. A substantially S-shaped in section top portion connects to the lower end of the edge section **2** and extends substantially normally therefrom. The S-shaped top portion of the siding comprises an upwardly open, downwardly extending, top gutter **3** and a downwardly open, upwardly extending rib **4** which connects to the top gutter on the outer edge thereof. A main siding section **5** connects to the outer end of the upwardly extending rib **4** and extends downwardly and usually slightly outwardly therefrom. This main section **5** usually is flat and is of any desired length for the particular siding material of the invention then being produced.

Another important feature of the new siding of the invention resides in a bottom section **6** that connects to the lower edge of the main section **5** and extends substantially normally therefrom inwardly of the siding **1** and terminates in a downwardly extending bottom rib **7**. This bottom rib **7** protrudes from the remainder of the siding for engaging with a top gutter **3** of an associated piece of the siding **1** to provide a desired tight interlock engagement therebetween. The bottom section **6** preferably, when the siding **1** is positioned in a vertical plane to form the sides of a building, for example, extends slightly upwardly to avoid flow of water over the outer surface of such bottom portion **6**.

A further important portion of the siding **1** is an integral reinforcing section **8** which connects to the bottom rib **7** at the inner end thereof and extends upwardly of the siding **1** into engagement with the under, or inner surface of the upwardly extending rib **4**, as indicated in Fig. 1 of the drawings. This reinforcing section **8** normally extends the length of the siding **1** and is of a slightly resilient construction because of being curved in a direction extending vertically of the strip of siding **1**. The reinforcing section **8** contacts, or abuts against the inner surface of the main section **5** adjacent both the lower and the upper portions thereof to provide vertically spaced reinforcing action on the main section **5**. Thus any forces, blows or impacts to which the siding **1** is subjeced will not be so apt to damage or bend any portion of the siding. In producing the siding **1**, it may

be desirable to form the upper portion of the siding, including the top gutter 3 and upwardly extending rib 4, of such a size as to bear down against the upper edge of the reinforcing section 8 to aid in positioning such reinforcing section tightly or snugly in the finished piece of siding.

When referring to various portions of the siding 1 as being the top portion thereof, or being outwardly extending in the siding, or downwardly extending, etc., these directions are taken with the presumption that the strip of siding 1 is secured to a member such as an upright stud 9 and with the siding being vertically positioned thereon for inter-locking engagement with an associated strip 5 of siding to form the sides of a structure.

It will be realized that any suitable nail or screw receiving holes 10 may be provided in the top edge section 2 of the siding strips so that any desired means can be used for securing the siding in position. Normally the siding is applied to a building or other structure by securing a suitable bottom end member having an upper edge configuration similar to the upper portion of one of the strips of the siding 1 in position and then seating the siding 1 firmly in such end member and nailing or otherwise securing the siding in position after which further strips of siding can readily be positioned in desired interlocking engagement with the previously positioned pieces of siding.

A modified type of the siding of the invention is shown in Figs. 2 and 3 and is indicated as a whole by the numeral 1*a*. The siding 1*a* has a top gutter 3*a* and an upwardly extending top rib 4*a* thereon, both similar to corresponding portions of the siding 1. Likewise, a main section 5*a* is provided on this siding 1*a* and a bottom rib 7*a* is formed on the lower portion of the siding.

As an important distinction of the siding 1*a*, a plurality of reinforcing strips 11 are provided for resilient reinforcing action in the siding. These reinforcing strips 11 normally engage with the inner surfaces of the upwardly extending top rib 4*a* and the inner surface of the downwardly extending bottom rib 7*a* and extend resiliently therebetween, and usually are in tight engagement therewith. The strips 11 are curved in a vertical direction and engage with spaced vertical portions of the main siding section 5*a*. A further feature of the strips 11 is that they have rearwardly extending, vertically directed corrugations 12 provided on laterally spaced portions thereof. As indicated in Fig. 3, these corrugations 12 permit the reinforcing strips 11 to contact the main section 5*a* of the siding 1*a* over substantially the entire width of the strip 11, and the corrugations 12 greatly strengthen the strips 11 to provide a maximum reinforcing action with use of a minimum amount of material. Obviously the strips 11 can be provided at any desired laterally spaced portions of the siding 1*a*.

It will be realized that the top gutters 3 and 3*a* may be of a size that the adjacent strips of siding may require some pounding or be otherwise forced downwardly to engage the bottom ribs 7 or 7*a* with the top gutter of the previously laid strip of siding.

From the foregoing, it is contended that a new type of a siding has been provided by the invention and that this contoured siding can be easily secured in position in inter-locking relationship with other corresponding strips of siding material. The siding may have any desired finish applied thereto, such as enamel baked thereon, and the siding is of sturdy construction and will have an effective service life so that the objects of the invention have been achieved.

While several complete embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. A metal siding comprising a shaped metal strip adapted for interlocking engagement with adjacent similar pieces of metal siding, said metal strip comprising a top nailing edge section, an upwardly open downwardly extending top gutter connecting to said top nailing edge section, a downwardly open upwardly extending rib connecting to said top gutter, a flat main siding section extending downwardly and outwardly from said upwardly extending rib, a bottom flat siding section connecting to said main siding section and extending inwardly therefrom at substantially a right angle thereto, a downwardly extending bottom rib connected to said bottom siding section and protruding downwardly therefrom for engaging a top gutter of an adjacent piece of metal siding, and an integral resilient curved reinforcing section connected to said bottom rib and extending up to and engaging said upwardly extending rib, said reinforcing section extending the length of the said main siding section and contacting said main siding section at spaced vertical points to reinforce such main siding section.

2. A metal siding comprising a shaped metal strip adapted for interlocking engagement with adjacent similar pieces of metal siding, said metal strip comprising a top nailing edge, an upwardly open downwardly extending top gutter connecting to said top nailing edge, a downwardly open upwardly extending rib connecting to said top gutter, a main siding section extending downwardly from said upwardly extending rib, a bottom siding section connecting to said main siding section, a downwardly extending bottom rib connected to said bottom siding section and protruding downwardly therefrom for engaging a top gutter of an adjacent piece of metal siding, and an integral reinforcing section of said metal strip connected to said bottom rib and extending up to and engaging said upwardly extending rib, said reinforcing section contacting said main siding section at spaced vertical points to reinforce such main siding section.

3. A unitary metal siding comprising a shaped metal strip adapted for interlocking engagement with adjacent similar pieces of metal siding, said metal strip comprising a top nailing edge, an upwardly open downwardly extending top gutter connecting to said top nailing edge, a downwardly open upwardly extending rib connecting to said top gutter, a flat main siding section extending downwardly and outwardly from said upwardly extending rib, a bottom flat siding section connecting to said main siding section and extending inwardly therefrom at substantially a right angle thereto, a downwardly extending bottom rib connected to said bottom siding section and protruding downwardly therefrom for engaging a top gutter of an adjacent piece of metal siding, and a resilient reinforcing section engaging the inner surface of said bottom rib and extending up to and engaging the inner surface of said upwardly extending rib, said reinforcing section contacting the back of said main siding section at spaced vertical points to reinforce such main siding section.

4. A contoured siding unit comprising a top securing edge section, an S-shaped in section top portion connected to said edge section and extending generally normal thereto, a flat main section connected to said S-shaped top portion, a bottom portion having a downwardly protruding bottom rib thereon for engaging an S-shaped top portion of an adjacent siding, and a resilient curved reinforcing strip engaging and extending between inner surfaces of said S-shaped top portion and said bottom rib, said reinforcing strip being fixedly carried by said S-shaped top portion and by said bottom rib.

5. A contoured siding comprising a top securing edge section, an S-shaped in section top portion connected to said edge section and extending generally normal thereto, a flat main section connected to said S-shaped top portion, a bottom portion having a downwardly protruding bottom rib thereon for engaging an S-shaped top portion of an adjacent siding, and a resilient curved reinforcing strip engaging and extending between inner surfaces of said S-shaped top portion and said bottom rib, said

reinforcing strip being curved in the direction extending from top to bottom thereof and having laterally spaced rearwardly extending reinforcing corrugations therein.

6. A contoured siding comprising a top securing edge section, an S-shaped in section top portion connected to said edge section and extending generally normal thereto, a flat main section connected to said S-shaped top portion, a bottom portion having a downwardly protruding bottom rib thereon for engaging an S-shaped top portion of an adjacent siding, and an integral reinforcing strip extending the length of the siding and connecting to said bottom rib and being in resilient engagement with a recessed inner surface of said top portion, said reinforcing strip abutting on said main section at vertically spaced portions thereof.

7. A siding comprising a top edge section, an S-shaped in section top portion connected to said edge section and extending generally normal thereto, said S-shaped section having a downwardly extending upwardly open top gutter therein directly connected to said top edge section, a main section connected to said S-shaped top portion and extending downwardly therefrom, a bottom portion having a downwardly protruding bottom rib thereon for engaging an S-shaped top portion of an adjacent siding, and a resilient curved reinforcing member extending between and fixedly positioned by said S-shaped top portion and said bottom rib and abutted against spaced vertical portions of said main section.

8. A siding comprising a top edge section, an S-shaped in section top portion connected to said edge section and extending generally normal thereto, a main section connected to said S-shaped top portion, a bottom portion having a downwardly protruding bottom rib thereon for engaging an S-shaped top portion of an adjacent siding, and a resilient curved reinforcing member resiliently positioned by and extending between said S-shaped top portion and said bottom rib and contacting the main section for reinforcing action thereon.

9. A siding comprising a metal sheet including a top edge section, an S-shaped in section top portion connected to said edge section and extending generally normal thereto, a main section connected to said S-shaped top portion, and an upwardly inclined bottom portion having a downwardly protruding bottom rib thereon for engaging an S-shaped top portion of an adjacent siding; and a reinforcing member extending between said S-shaped top portion and said bottom rib and contacting the main section for reinforcing action thereon, said reinforcing member being carried by said metal sheet.

References Cited in the file of this patent

UNITED STATES PATENTS

1,488,090	Buhr	Mar. 25, 1924
1,693,438	Goodell	Nov. 27, 1928
2,607,449	Daniels	Aug. 19, 1952
2,642,968	Roush et al.	June 23, 1953