Sept. 23, 1947. J. G. CARR 2,427,762

METAL SIDING

Filed Feb. 9, 1945 2 Sheets-Sheet 1

Fig. 1.

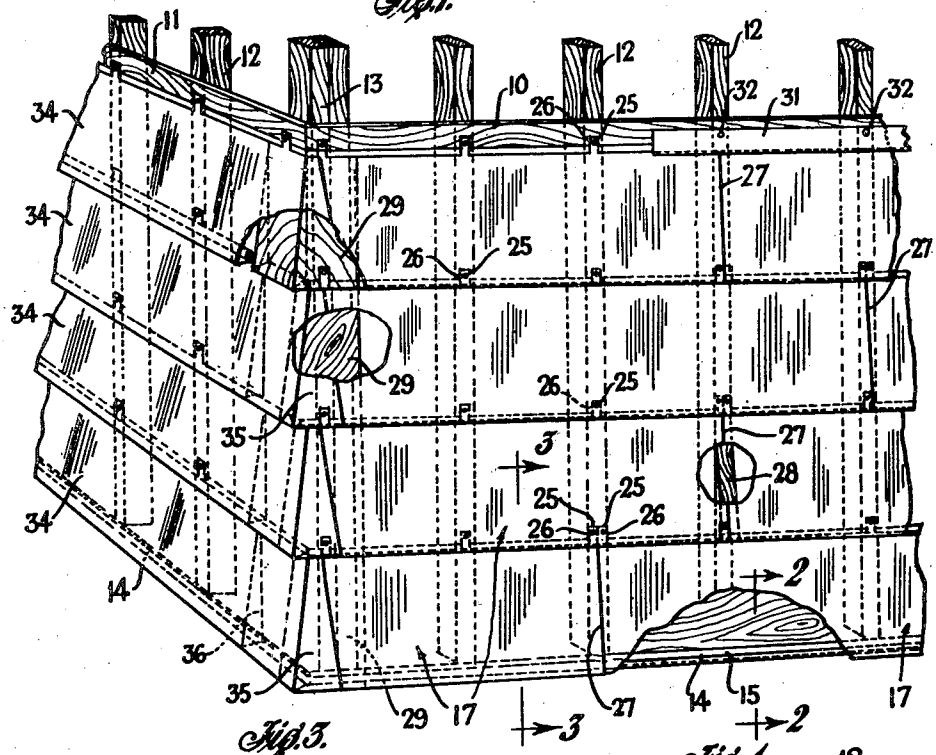


Fig. 3.

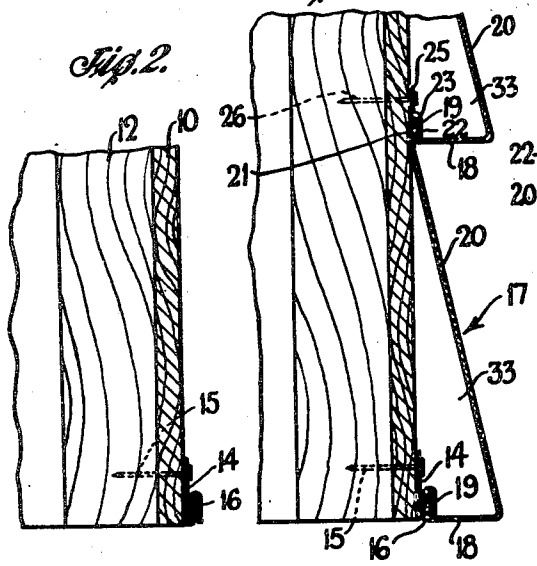
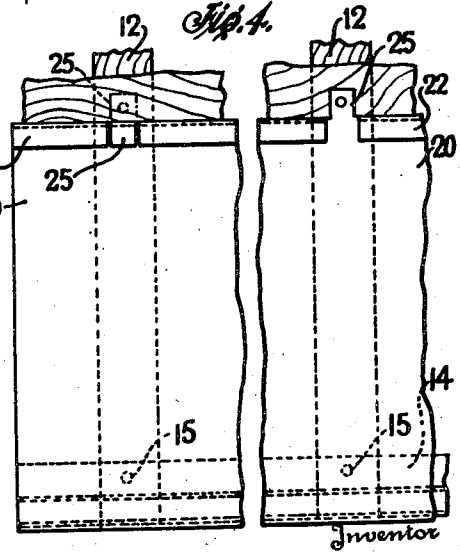


Fig. 2.

Fig. 4.



Inventor

JOHN G. CARR

By Ely & Frye

Attorneys

Sept. 23, 1947. J. G. CARR 2,427,762

METAL SIDING

Filed Feb. 9, 1945 2 Sheets-Sheet 2

Fig. 5.

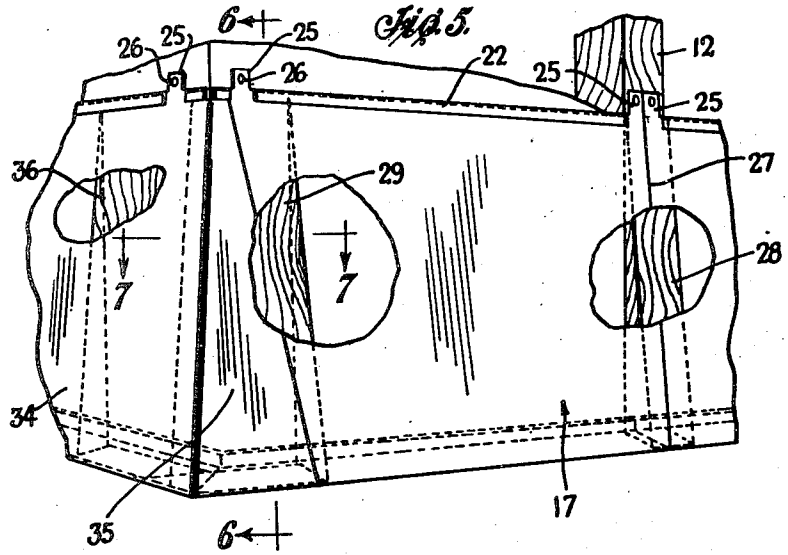


Fig. 6.

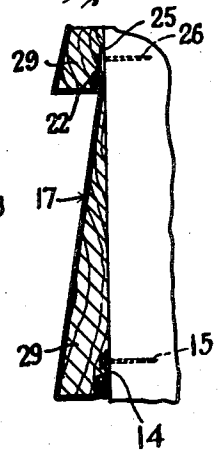


Fig. 7.

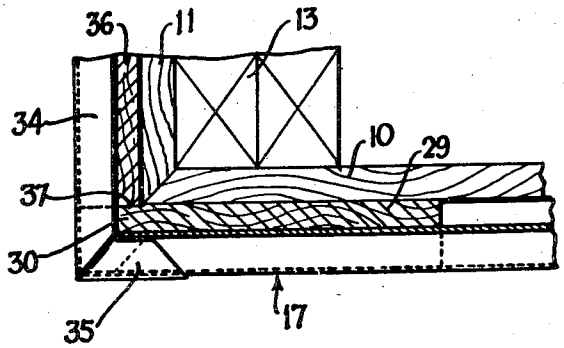
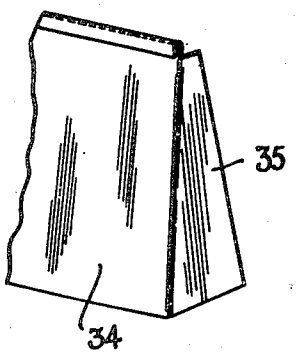


Fig. 8.



Inventor

JOHN G. CARR

Ely & Fuge

By

Attorneys

Patented Sept. 23, 1947

2,427,762

UNITED STATES PATENT OFFICE

2,427,762

METAL SIDING

John G. Carr, Akron, Ohio

Application February 9, 1945, Serial No. 577,024

4 Claims. (Cl. 189—86)

1

This invention relates to improvements in metal siding for use more particularly on the outside of houses and other buildings.

An object of the invention is to provide a siding formed of a plurality of sections or strips of sheet metal interlocked on the outside of a building and having the appearance of ordinary lap siding, but which is fireproof and waterproof, and also provides a plurality of insulating air spaces between each section or strip and the building walls.

Another object is to provide a siding in which the sections or strips may be quickly and easily assembled and secured in position on the building so that all fastening means are completely concealed.

A further object is to provide each metal section or strip with an upwardly extending flange on its lower end and a downwardly extending flange on its upper end formed to provide a socket or channel which snugly receives the flange on the lower end of the adjacent section or strip in overlapping relation so as to provide a waterproof joint between the sections.

A further object is to bend a small portion of each downwardly extending flange upwardly at predetermined intervals out of the plane of the socket or channel to permit a fastening element to extend through such portion to secure the section to the building wall, each fastening element thereby being out of any possible contact with any section or strip except the one through which it extends.

A further object is to provide a metal base strip along the bottom of the building walls which strip has a socket or channel that receives the upwardly extending flange of the lowermost metal section to form a waterproof joint at the bottom of the siding.

A further object is to provide the sections on certain sides of the building adjacent the corners with angular extensions that extend around the corners and overlap the sections on the other sides, suitable backing or filling material being utilized to insure a tight fit at the corners.

A further object is to arrange horizontally adjacent sections in close abutting relation with filling or backing strips being used to maintain the proper relation at all times.

Other objects and advantages will become apparent from the following description taken in conjunction with the accompanying drawings.

In the drawings:

Fig. 1 is a perspective view of a portion of two walls of a building covered with my siding;

2

Fig. 2 is an enlarged partial sectional view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a similar view taken substantially on line 3—3 of Fig. 1;

Fig. 4 is a fragmentary detail view of one of the metal sections showing how these sections are fastened to a building;

Fig. 5 is an enlarged perspective view of a portion of the corner of the building showing my novel corner construction, as well as my arrangement for abutting the sections;

Fig. 6 is a partial sectional view taken substantially on line 6—6 of Fig. 5;

Fig. 7 is a similar view taken substantially on line 7—7 of Fig. 5; and

Fig. 8 is a partial perspective view of one of the metal sections used on the corner of the building.

Referring to the drawings the numerals 10 and 11 designate respectively a portion of the front and one side wall of a house or other building adapted to receive the siding of this invention. It will be understood that this siding may be put on as many walls of the building as desired and for any height desired, but it is not believed necessary to illustrate more than the portions of the walls shown in order to understand the invention. The walls 10 and 11 may be formed of any conventional material as is well understood in this art, and are suitably supported at spaced intervals by the usual two by fours or wooden posts 12. Preferably the corner posts are of double thickness as indicated at 13.

In applying my siding, a base strip 14 is first secured to the walls at the bottom by suitable fastening means such as nails 15 or the like, which are placed at selected intervals so as to extend through the walls and into the wooden posts 12 and 13. This base strip extends for the length of each wall on which the siding is to be applied, and is preferably formed of sheet metal, the lower portion of which is bent as indicated in Figs. 2 and 3 to provide a socket or channel 16.

Next, a plurality of sheet metal sections or strips, designated as a whole by the numeral 17, are secured to the base strip and to the walls. The arrangement on one of the walls, for example wall 10, will first be described, and as these sections are identical except for certain corner sections which will later be referred to, a description of one will suffice for all. As more clearly shown in Fig. 3, sections 17 are bent to provide a base portion 18 having a rear upwardly extending flange 19, and a front wall portion 20 which extends diagonally from the front of base portion

18 into contact with wall 10. The upper part of portion 20 runs parallel to and engages wall 10, as indicated at 21, and the upper end is bent over to provide a downwardly extending flange 22 which forms a socket 23, similar to socket 16. The flange 19 is snugly received in the socket 16 of the base strip and forms a waterproof joint at the base.

At intervals, predetermined by the location of the wooden posts 12 and 13, a small portion 25 of the flange 22 is bent upwardly out of the plane of flange 22 into engagement with wall 10, and suitable fastening means, such as nails 26 or the like, extend through this portion and through the wall 10 into the adjacent wooden post. Each section 17 in the lower row is thus securely held in place on wall 10 by the flange and socket arrangement with the base strip and by the fastening means 26 at the top.

Successive metal sections 17 are arranged across the bottom of wall 10 and may be of any desired length. The length of these metal sections will usually depend upon the spacing of the posts 12 and 13, as it is desirable to have each section attached to two or more of these posts, with the ends of the sections that are intermediate the corners of the building terminating about midway of one of the posts 12. In this way adjacent horizontally arranged sections are brought together in abutting relation in front of one of the posts 12, as indicated at 27. The upwardly bent portions 25 on the ends of these abutting sections also abut each other, as more clearly shown in Fig. 5, so that the posts 12 in the rear of such abutting sections receive a fastening element 26 for each section.

To assist in maintaining the proper abutting relation between adjoining sections, blocks of wood or other suitable backing or filling material 28 are inserted between the building wall and the front portions 20 of the sections 17. Blocks 28 are of a size and shape to completely fill the space in front of posts 12, preferably being about the same width as these posts and tapering in thickness to tightly fit into the space provided. With these blocks 28 in position the abutting edges of the sections will be kept in proper alignment unless deliberately distorted.

The section 17 in the lower row on wall 10 which terminates at the left corner of the building, and which is more clearly shown in Figs. 5, 6, and 7, has its left end extending beyond the corner so as to meet or abut in a diagonal plane with the similar end of the section secured to the adjacent side wall 11 (see Fig. 7). A block 29 of wood or other suitable backing or filling material is inserted between wall 10 and the front portion of the metal section. Block 29 is shown slightly wider than the width of the double posts 13 and preferably is as wide as those posts, with the side nearest the corner extending a little beyond the corner, as indicated at 30. Block 29 is also of a size and shape to completely fill the space in which it is inserted, tapering in thickness in the same manner as block 28.

After the lower row of metal sections is in position on wall 10, additional rows are put on in overlapping relation. Referring again to Fig. 3 it will be seen that the upwardly extending flanges 19 on the second row of sections 17 snugly fit into the sockets 23 on the lower row of sections and form waterproof joints with such sections. Fastening means 26 extending through portions 25 secure the upper ends of the second row of sections to the wooden posts in the same manner

that the lower sections were secured. Likewise, horizontally adjacent sections in the second row abut each other and are backed with blocks 28 to preserve the abutting relation in the same way as the lower sections, while blocks 29 are used at the corners in the same manner as used in the lower row.

The third row and as many additional rows of metal sections as desired are secured in overlapping relation in the manner described until the siding on wall 10 is completed. After the top row is put on, a finishing strip 31, also preferably formed of metal is secured to the wooden posts as at 32 and conceals the upper edge of the top row of metal sections. Member 32 may also be flanged for engagement with the sockets 23 on the top row of sections or it may be just a flat metal strip.

As additional rows of metal sections are put on the wall, the sections are preferably of lengths that will permit staggering of the abutting edges and blocks 28 in the respective rows, as clearly shown in Fig. 1.

It will be observed that since all of the portions 25 are bent upwardly out of the plane of the flanges 22, the fastening means 26, as well as the fastening means 15 in the base strip, cannot be contacted by any of the metal in the sections which respectively overlap and conceal these means. This arrangement tends to prevent rusting of the siding at the points at which it is fastened to the wall. Previous experience has shown that most rust in metal siding forms at the places it is secured to the wall and when overlapping metal sections contact the fastening members in the next adjacent section, rust spots soon become visible on the siding. In the present arrangement, however, any rust around the fastening means cannot be observed since these means and the area adjacent thereto is completely concealed by the adjacent metal section.

Also it will be noted that waterproof joints are provided, and that the metal structure would be considered fireproof, so as to materially reduce fire insurance rates on a building constructed with this siding. Further, by using backing or filling blocks at various points that completely fill the space between the wall and the front portion of the metal sections, a plurality of separated insulating air spaces are provided, for example, such as the space 33 in Fig. 3.

The siding material has been described in connection with wall 10, but except for the corner metal sections on wall 11, and on as many other walls as needed, the construction on the other walls is identical with wall 10. On wall 11, metal sections 34 are identical with sections 17 in all respects except that at the corner a tapered angular extension 35 is formed on the end of sections 34 to overlap the corner and tightly engage the outside surface of the adjacent section 17 on wall 10. As more clearly shown in Fig. 7, a block 36 of wood or other suitable backing or filling material is arranged to fill the space between wall 11 and the front portion of section 34 in the same manner that block 29 is utilized. The corner edge of block 36, however, preferably engages block 29 as indicated at 37 so that the corner space between the two building walls and the metal sections is completely filled. The corner edges of sections 34 abut the edges of sections 17 in a diagonal plane, while the extensions 35 conceal the joints between these sections and give the appearance of a continuous structure around the corners.

While I have shown and described one form of the invention, it will be apparent that changes and modifications may be made therein without departing from the spirit of the invention or from the scope of the subjoined claims.

What is claimed is:

1. Wall siding comprising a pair of metal sections arranged in horizontal alignment on adjacent angularly arranged walls of a building with their adjacent edges in abutting relation and spaced from said walls, each section having an inwardly and upwardly turned flange on its lower end and an outwardly and downwardly turned flange on its upper end forming a socket with its respective section, portions of said downwardly turned flanges being bent upwardly at spaced points out of the plane of said sockets, fastening means extending through said portions to secure said sections to said walls, and a backing block arranged in the space between each wall and said sections, at least one of said sections having an angular extension that overlaps said other section and conceals the edge of said section.

2. Wall siding for a corner of a building comprising a metal section on each wall arranged with their adjacent edges in abutting relation at the corner and spaced from said walls, each section having an inwardly and upwardly turned flange on its lower end and an outwardly and downwardly turned flange on its upper end forming a socket with its respective section, portions of said downwardly turned flanges being bent upwardly at spaced points out of the plane of said sockets, fastening means extending through said portions to secure said sections to said walls, and a block arranged to fill the space between each wall and said sections at the corner of the building, at least one of said sections having an angular extension that extends around the corner of the building overlapping said other section and concealing the edge of said latter section.

3. Wall siding for at least two walls meeting at the corner of a building comprising a base strip on each wall having a socket along its lower edge, fastening means for said base strip out of the plane of said sockets, a layer of metal sections on each wall having inwardly and upwardly turned flanges on their lower ends extending into said sockets and outwardly and downwardly turned flanges on their upper ends forming additional sockets with their respective sections, portions of said latter flanges being bent upwardly at spaced points out of the plane of said additional sockets, and fastening means for said sections extending through said portions, at least one of said sections on one wall having an angular extension that extends around the corner and overlaps the adjacent section on the other wall.

4. Wall siding constructed in accordance with claim 3 wherein backing blocks are inserted between the walls and the sections in the area adjacent the junctions of the sections.

JOHN G. CARR.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
553,514	Crawford	Jan. 28, 1896
720,893	Charlebois	Feb. 17, 1903
967,415	McFarland	Aug. 16, 1910
2,126,676	Thomas	Aug. 9, 1938
2,128,976	Voegeli	Sept. 6, 1938
2,178,357	Hoess	Oct. 31, 1939