UNITED STATES PATENT OFFICE.

EDWIN G. CHARLEBOIS, OF WATERTOWN, NEW YORK.

SHEET-METAL ANGLE-SECTION.

SPECIFICATION forming part of Letters Patent No. 720,892, dated February 17, 1903.

Application filed July 7, 1902. Serial No. 114,536. (No model.)

To all whom it may concern:

Be it known that I, EDWIN G. CHARLEBOIS, of Watertown, in the county of Jefferson, in the State of New York, have invented new and useful Improvements in Sheet-Metal Angle-Sections, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in sheet-metal covering or siding for buildings, and refers more particularly to sheet-metal angle-pieces for the corners and angles of the building as used in conjunction with sheet-metal clapboards, belts, and water-tables.

The object of this invention is to produce a new article of manufacture consisting of angular sheet-metal sections adapted to fit in the outer surface of the angles of a building and to cover the ends of sheet-metal siding meeting at said angles.

A further object is to protect the joints at said angles from the elements and to render said angles more pleasing in effect than would be possible in the mitering of joints, as is the usual practice in wood siding, thereby giving the appearance of a continuous column made up of truncated pyramids.

To this end the invention consists in the combination, construction, and formation of angle or corner boards, as hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of a corner of a building, showing the application of my improved corner-board in conjunction with sheet-metal siding or clapboards. Fig. 2 is a similar perspective view, on an enlarged scale, of two adjacent corner-pieces and the adjacent ends of the clapboards covered thereby. Fig. 3 is a sectional view taken on line 3 3, Fig. 2. Fig. 4 is a perspective view of one of the detached corner-pieces for forming the corner-board. Fig. 5 is a horizontal sectional view through a corner of the building, showing my improved corner-piece and the adjacent ends of the clapboards as applied to said corner. Fig. 6 is a similar view of an angle of the building, showing the application of my invention thereto. Fig. 7 is a perspective view of the angle-sections seen in Fig. 6. Fig. 8 is a perspective view of a modified form of angle-plate and the adjacent ends of the clapboards covered thereby. Fig. 9 is a perspective view of the detached corner-piece seen in Fig. 8. Fig. 10 is a horizontal sectional view of a portion of a building, showing a portion of an outer casing and a modified form of my angle-section covering the adjacent end of the clapboard. Fig. 11 is a perspective view of the angle-sections seen in Fig. 10.

Similar reference characters indicate corresponding parts in all the views.

As previously stated, this invention is designed for use in the angles of buildings, and more particularly as a substitute for corner-boards and angle-pieces to cover the ends of the siding strips or sections meeting at the angles and also as a covering for the ends of the siding-strips where they abut against a casing or similar break in the continuity of the siding courses, as seen in Figs. 10 and 11.

In Fig. 1 I have shown a portion of a building consisting of corner-posts and studs 1 and a sheathing 2, to which is applied a siding consisting of a series of sheet-metal clapboard-sections 3, a belt 4, a water-table 5, and a corner-board composed of a series of sheet-metal sections 6, 7, and 8.

The siding strips or sections 3 are preferably formed of sheet metal of substantially the same construction as that set forth in my allowed application, Serial No. 91,467, filed January 27, 1902, and consisting of a main body 9, flaring outwardly and downwardly from its upper edge, said upper edge being bent outwardly and downwardly for forming a groove 10, and the lower edge being bent inwardly and upwardly for forming a lower wall 11 and a flange 12, the upturned edge of the lower flange being separated a greater distance from the body of the strip or section than the free edge or flange of the upper edge, and the inner face of the flange 12 is disposed in substantially the same vertical plane as the upper edge of the main body, thus disposing the main body in a plane at an angle with that of the flange 12 and inner face of the upper edge of the main body.

The upper and lower edges of the belt-section 4 are similar in form to the upper and lower edges of the sections 3; but the intermediate portion is usually pressed outwardly for forming a ledge 13 or any other desired form of molding.

No. 720,892. PATENTED FEB. 17, 1903.

E. G. CHARLEBOIS.

SHEET METAL ANGLE SECTION.

APPLICATION FILED JULY 7, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 5.

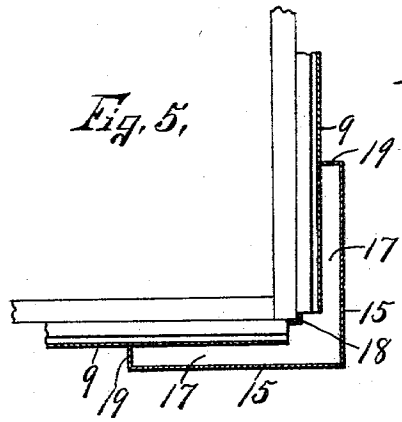


Fig. 6.

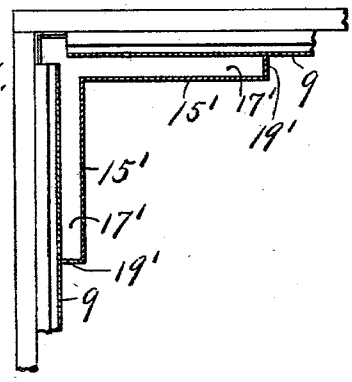


Fig. 7.

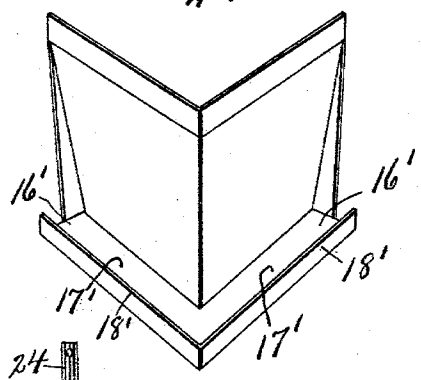


Fig. 8.

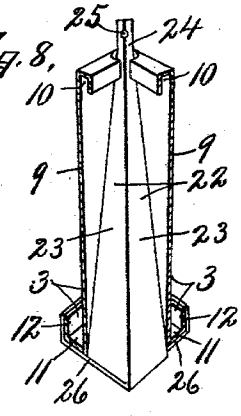


Fig. 9.

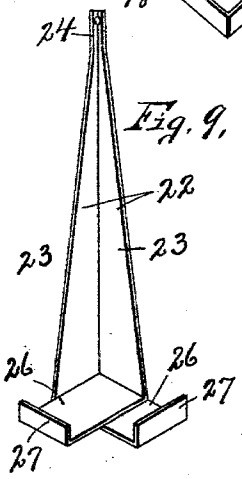


Fig. 10.

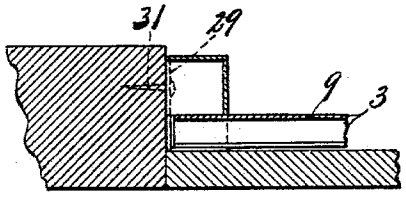
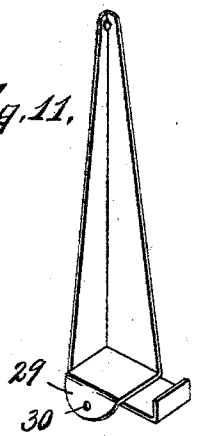


Fig. 11.



WITNESSES:

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The object of this invention is to produce a new article of manufacture consisting of angular sheet-metal sections adapted to fit in the outer surface of the angles of a building and to cover the ends of sheet-metal siding meeting at said angles.

A further object is to protect the joints at said angles from the elements and to render said angles more pleasing in effect than would be possible in the mitering of joints, as is the usual practice in wood siding, thereby giving the appearance of a continuous column made up of truncated pyramids.

To this end the invention consists in the combination, construction, and formation of angle or corner boards, as hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of a corner of a building, showing the application of my improved corner-board in conjunction with sheet-metal siding or clapboards. Fig. 2 is a similar perspective view, on an enlarged scale, of two adjacent corner-pieces and the adjacent ends of the clapboards covered thereby. Fig. 3 is a sectional view taken on line 3 3, Fig. 2. Fig. 4 is a perspective view of one of the detached corner-pieces for forming the corner-board. Fig. 5 is a horizontal sectional view through a corner of the building, showing my improved corner-piece and the adjacent ends of the clapboards as applied to said corner. Fig. 6 is a similar view of an angle of the building, showing the application of my invention thereto. Fig. 7 is a perspective view of the angle-sections seen in Fig. 6. Fig. 8 is a perspective view of a modified form of angle-plate and the adjacent ends of the clapboards covered thereby. Fig. 9 is a perspective view of the detached corner-piece seen in Fig. 8. Fig. 10 is a horizontal sectional view of a portion of a building, showing a portion of an outer casing and a modified form of my angle-section covering the adjacent end of the clapboard. Fig. 11 is a perspective view of the angle-sections seen in Fig. 10.

Similar reference characters indicate corresponding parts in all the views.

As previously stated, this invention is designed for use in the angles of buildings, and more particularly as a substitute for corner-boards and angle-pieces to cover the ends of the siding strips or sections meeting at the angles and also as a covering for the ends of the siding-strips where they abut against a casing or similar break in the continuity of the siding courses, as seen in Figs. 10 and 11.

In Fig. 1 I have shown a portion of a building consisting of corner-posts and studs 1 and a sheathing 2, to which is applied a siding consisting of a series of sheet-metal clapboard-sections 3, a belt 4, a water-table 5, and a corner-board composed of a series of sheet-metal sections 6, 7, and 8.

The siding strips or sections 3 are preferably formed of sheet metal of substantially the same construction as that set forth in my allowed application, Serial No. 91,467, filed January 27, 1902, and consisting of a main body 9, flaring outwardly and downwardly from its upper edge, said upper edge being bent outwardly and downwardly for forming a groove 10, and the lower edge being bent inwardly and upwardly for forming a lower wall 11 and a flange 12, the upturned edge of the lower flange being separated a greater distance from the body of the strip or section than the free edge or flange of the upper edge, and the inner face of the flange 12 is disposed in substantially the same vertical plane as the upper edge of the main body, thus disposing the main body in a plane at an angle with that of the flange 12 and inner face of the upper edge of the main body.

The upper and lower edges of the belt-section 4 are similar in form to the upper and lower edges of the sections 3; but the intermediate portion is usually pressed outwardly for forming a ledge 13 or any other desired form of molding.

The upper and lower edges of the water-table 5 are also similar in form to the corresponding parts of the sections 3, the intermediate portions of said sections 5 being pressed or stamped outwardly for forming ledges 14, which may also be molded in any other form desired to serve the purpose of a water-table.

The corner-board sections 6 are arranged one above the other, one section for each course of clapboard-sections 3, and each is preferably formed of sheet metal pressed into the desired angle corresponding to the angle of the building to which it is applied, thereby forming wings 15, arranged at an angle with each other, each of said wings consisting of a main body flaring outwardly and downwardly from its upper edge and having its lower edge bent inwardly and upwardly for forming a groove 16, a bottom wall 17, and upturned flange 18.

The lower or bottom wall 17 of each of the wings 15 is formed of greater width than the bottom walls of the clapboard-sections to which the corner-pieces are applied, being usually of substantially twice the width at the base than the base of the clapboard-sections, and the upright edges of said wings are provided with inturned flanges 19, which partially inclose the ends of the grooves 16 and taper upwardly to a point in proximity to the upper edges of their respective wings, the space between the flanges 18 and the adjacent edges of the flanges 19 being substantially equal to the width of the bases of the sections 9 for permitting the insertion of the clapboard-sections, or rather for permitting the application of the corner-pieces to the meeting ends of the clapboard-sections, and the inner edges of the flanges 19 are disposed in substantially the same plane as the outer surface of the clapboard-sections in order to fit closely against the same when the parts are assembled in operative position, as seen in Fig. 1. One purpose of forming these corner-board sections of greater width at the base than the clapboard-sections is to permit the formation of the flanges 19, which stiffen the angle-sections and also form a more perfect joint adapted to abut against the outer surfaces of the clapboards. Another purpose is to render the corner-board more pleasing in appearance.

The upper edges of the angle-pieces 6 are usually left plain and are inserted in the groove 10 at the upper edge of the clapboard-sections to which the angle-sections are applied, the lower edges of said angle-sections being simultaneously drawn upwardly, with the flanges 18 at the back of the flange 12. These clapboard-sections and angle-sections are usually assembled upon the building from the bottom upward, the first course of clapboards being placed in position upon the sides of the building with their ends approaching each other at the angle of the building, and the upper edges of the clapboards are then secured in position by suitable fastening means, as nails 20, in the manner set forth in my allowed application above referred to. This leaves the lower edges of this course of clapboards free. I then place one of the angle-pieces 6 in position against the meeting ends of the clapboards and slide the same upwardly until the upper edge of said angle-sections enter the groove 10 and the lower edge or flange 18 is inserted between the flange 12 and the adjacent face of the sheathing, this lower section being held in position by the water-table section 5, which is similarly formed at its upper edge and secured to the sheathing, and its lower edge is also secured to the building in any desired manner, as by suitable fastening means. (Not shown.) After the first course of clapboards and the corresponding angle-sections are placed in position the next course of clapboards is placed in position by moving the same upwardly until the flange 12 enters the groove 10, the upper edge of the clapboard-section being secured by a fastening means, as nails 20, similar to that described for securing the upper edge of the lower course, and when this course of clapboards is secured to both sides of the building approaching the angle the corresponding angle-piece is then placed in position by moving the same upwardly against the upper edge of the former section until the flange 18 is inserted into the groove 10 between the flange 12 and upper edge of the next lower corner-section, the upper edge of said angle-section of the second course entering the groove 10 of the second course of clapboards, as seen particularly in Fig. 3, and the operation repeated to cover the surface desired.

I have thus far described the angle-pieces used at the meeting ends of the clapboards, and the application of the sections 7 and 8 of the corner-pieces is effected in precisely the same manner, and it will therefore be unnecessary to further describe the manner of securing these sections in position. It will be understood that the belt-sections 4 and 5 and their corresponding corner-sections 7 and 8 may be substituted by the sections 3 and 6, if desired.

When it is desired to use my improved angle-section in the angle of the building, as seen in Fig. 6, I preferably form the sections substantially the reverse from that described for the corner-pieces, as seen in Figs. 6 and 7, in which I have shown such an angle-piece consisting of a main body 15′, flaring outwardly and downwardly from its upper edge and having its lower edge bent inwardly and upwardly for forming a groove 16′, bottom wall 17′, and an upturned flange 18′, the upright edges of the main body being formed with inwardly-projecting flanges 19′, corresponding to the flanges 19 of the device seen in Figs. 1 to 5, inclusive, and these sections are applied in the same manner as that described for the sections 6.

The angle-plate seen in Figs. 6 and 7 is

particularly efficient; but in some instances where the sides of the angle are short I preferably use a special form of angle-plate 22, as seen in Figs. 8 and 9, which consists of an upright angular body having triangular wings 23, made to fit the angle, the edges of which abut against the outer faces of the meeting ends of the clapboards. In this instance I usually cut away a portion of the meeting ends of the flanges forming the groove 10 in the clapboards to permit the upward insertion of an extension 24 of the section 22, which is provided with an aperture 25 for receiving a fastening member, as a nail, adapted to be driven into the sheathing or wall of the building. The lower edges of the wings 23 are provided with lateral extensions 26, having upturned ends 27, these extensions being of substantially the same width as the base of the wings 23 and formed of greater length than the base of said wings for permitting the insertion of the clapboards between the flanges 27 and the upright edges of the wings in the manner seen in Fig. 8, the flanges 27 corresponding with the flanges 18′ and are assembled in the same manner and serve the same function.

When a casing or other projection in the building forms a break in the continuity of the courses of clapboards, said clapboards are permitted to project within close proximity to or abut against said projection, and in this instance I usually employ another form of angle plate or section similar to that seen in Fig. 8, except that one of the bottom walls is bent downwardly instead of upwardly in close proximity to the adjacent edge of the other bottom wall for forming a lug or ear 29, which is provided with an aperture 30 for receiving a nail or other fastening means, as 31, which is driven into the casing, and thus holds the angle-section in position; otherwise this section is substantially the same as that shown and described in Figs. 8 and 9.

The operation of my invention will now be readily understood upon reference to the foregoing description and the accompanying drawings, and it will be noted that the essential feature of this invention is to provide a new article of manufacture consisting of an angle plate or section to conform to the angle of the building and to be applied to the angle at the same time that the clapboard-sections are applied.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with sheet-metal siding-strips, an angle-board for the corners and angles of the building consisting of a series of angular sheet-metal sections arranged one above the other and having overlapping edges and grooves to receive the ends of the siding-strips.

2. In combination with sheet-metal siding-strips having lengthwise grooves, an angle-board for the corners and angles of the building consisting of a series of angular sheet-metal sections flaring outwardly and downwardly, the upper edge of one and the lower edge of the next adjacent section being inserted in the groove of the adjacent siding-strip.

3. As a new article of manufacture, a sheet-metal angle-section for the purpose described having wings disposed at an angle with each other and formed with inturned end and base flanges the base-flanges extending beyond the end flanges.

4. As a new article of manufacture, a sheet-metal angle-section for the purpose described having wings disposed at an angle with each other, the lower edges of the wings being offset inwardly and upwardly and their end edges being bent inwardly and of less width than said offset.

5. As a new article of manufacture, an angular sheet-metal section for the purpose described, the angular sides flaring downwardly and outwardly and having their lower edges bent inwardly and upwardly.

6. As a new article of manufacture, an angular sheet-metal section for the purpose described, the angular sides flaring downwardly and outwardly and having their lower edges bent inwardly and upwardly and their end edges bent inwardly.

7. As a new article of manufacture, an angular sheet-metal section for the purpose described, the angular sides flaring downwardly and outwardly and having their lower edges bent inwardly and upwardly and their end edges bent inwardly and formed of less width than the width of the inwardly-projecting bottom portions.

8. In combination with the meeting ends of sheet-metal clapboards meeting at an angle in the building, of a series of angular sheet-metal sections of substantially the width of the clapboard and covering said meeting ends.

9. In combination with the ends of sheet-metal clapboards of the class described meeting at an angle in the building, a sheet-metal section fitting the angle and covering said meeting edges, the main body of the section flaring outwardly and downwardly from its upper edge.

In witness whereof I have hereunto set my hand this 2d day of July, 1902.

EDWIN G. CHARLEBOIS.

Witnesses:
H. E. CHASE,
MILDRED M. NOTT.