Jan. 17, 1956 L. H. ALLISON 2,731,116

CORNER STUD CONSTRUCTION

Filed March 24, 1952

Fig. 1.

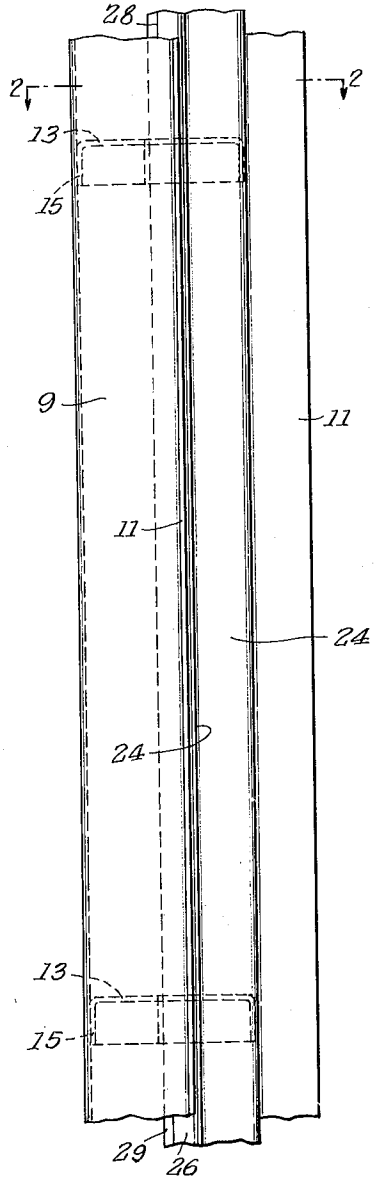


Fig. 2.

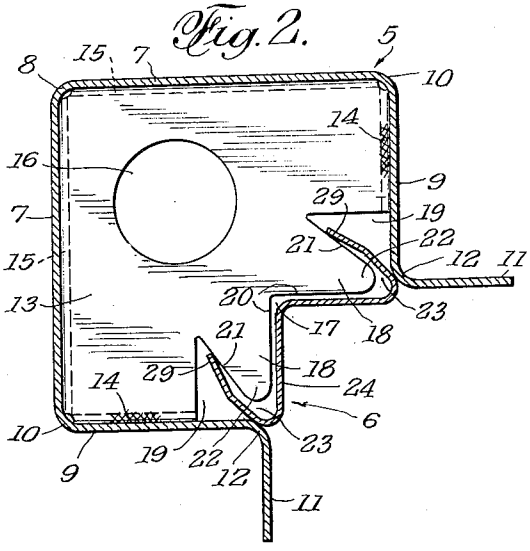
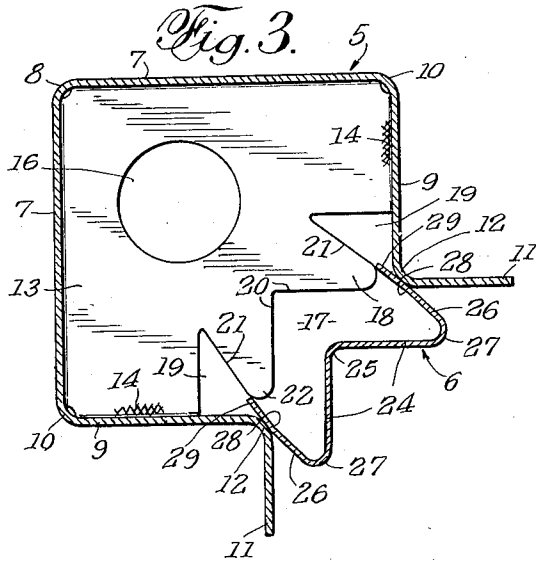


Fig. 3.



Inventor

LLOYD H. ALLISON

By C. E. Stratton

Attorney

United States Patent Office 2,731,116 Patented Jan. 17, 1956

2,731,116

CORNER STUD CONSTRUCTION

Lloyd Hamilton Allison, Los Angeles, Calif., assignor to Plan-It Homes, Los Angeles, Calif., a corporation of California

Application March 24, 1952, Serial No. 278,262

4 Claims. (Cl. 189—38)

This invention relates to a corner stud construction and has for an object to provide a novel and improved simplified construction that can be assembled without tools.

Another object of the invention is to provide a corner stud of novel cross-sectional form so as to be strong yet light in weight.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes one embodiment of the present invention, which is given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a side elevation view, broken at both ends, of a corner stud construction according to the present invention.

Fig. 2 is an enlarged cross-sectional view as taken on line 2—2 of Fig. 1.

Fig. 3 is a similar view, showing the manner of assembling said stud construction.

The present stud construction is adapted for use in a building in which the walls comprise substantially uniformly spaced metal studs, and panels spanning between the studs. The present stud is intended as typical of one that would be used at the exterior corners of such a building. It will be realized that such studs are erected on a sill and connected across the top by a girder to form a metal skeleton receptive of the spanning panels, the latter being firmly held in place by side and corner cover plates applied from the outside and fastened to the studs to thereby firmly lock the panels in place.

Referring now to the drawing in greater detail, the present corner stud comprises, generally, an elongated stud element **5**, and a wiring cover **6** having friction engagement with said element to enclose the interior thereof. Of this stud construction, element **5** is the one that is connected at the ends to a sill and girder.

Stud element **5** is formed of sheet metal of which steel is preferred. The cross-sectional form of said element comprises outer walls **7** connected at a corner **8** and at right angles to each other, side walls **9** bent from corners **10** at the edges of walls **7** and at right angles to the respective walls **7**, and outwardly turned flanges **11** bent at right angles from corners **12** at the edges of walls **9**. Formed in this manner, stud element **5** has, in part, a generally square or rectangular cross-sectional form in which one corner is open and in which the opening is defined between corner bends **12**. The flanges **11** cooperate with the flange edges of an angle member (not shown) disposed with its flanges parallel to and spaced

from walls **7** to comprise channels receptive of the lateral edges of wall panels. Said angle member does not comprise a part of the present invention and is mentioned to give purpose to flanges **11**. However, the corner bends **12** are important to the invention, since they define the throat through which element **6** is passed into operative position.

Stud element **5**, in suitable longitudinally spaced relation, is provided with transverse plates **13** that, by welds **14**, are permanently secured in place. Said plates **13** are formed with edge flanges that tightly fit within walls **7** and **9**. A relatively large hole **16** is provided in each plate **13**.

Each plate **13**, while mainly rectangular or square, at the end thereof directed toward the corner opening in element **5**, is provided by a right angled notch **17** defined between two V-shaped lobes **18**, and with two similar acute-angled notches **19** defined between said lobes and the main portion of the plate. The edges **20** of notch **17** are respectively substantially aligned with the flanges **11**, while the edges **21** of notches **19** converge slightly toward each other from the rounded ends **22** of lobes **18** so as to form a serrated wedge-lock member having or approximating an outline of a letter M. Said rounded ends are so spaced from corners **12** that narrow passages **23** are formed between said corners and rounded ends.

The wiring cover **6** is also preferably formed of sheet steel but of a somewhat thinner gauge so as to have limited flexibility. Said cover, in cross-section, resembles the outline of a letter M in which the intermediate walls **24** are at right angles and are connected by a corner bend **25**, and the outer walls **26** extend from corner bends **27** in generally parallel relation. Each wall **26**, along a line **28** is bent to form an obtuse angle so that the ends **29** of walls **26** are directed toward each other at quite a small angle.

It will be seen that cover **6** has a cross-sectional shape that is generally similar to the shape defined by edges **20** and **21** of plates **13**. Therefore, upon application of said cover to stud element **5**, the former may be pressed into place with walls **24** engaging against and being limited by edges **20**. Edges **21** being widest spaced at ends **22**, ends **29** of walls **26** are somewhat straightened, as the same are introduced into narrow passages **23**, because of confinement by corners **12** and said rounded ends **22**. Since edges **21** converge, as cover **6** is being pressed into place, wall ends **29** flex inwardly as they follow the converging edges **21**. Consequently, when walls **24** achieve abutment against edges **20**, cover **6** forms a tensioned engagement with the column and is firmly held in place to completely enclose the interior of the stud which, thereby, is adapted to be utilized as a wiring chase.

While not so shown in Fig. 2, in practice, cover walls **24** abut edges **20** so as to be in substantial alignment with flanges **11**.

While the invention that has been illustrated and described is now regarded as the preferred embodiment, the construction is of course, subject to modification without departing from the spirit and scope of the invention. It is, therefore, not desired to restrict the invention to the particular form of construction illustrated and described, but to cover all modifications that may fall within the scope of the appended claims.

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

1. In a corner stud having an elongated sheet metal stud element bent into a rectangular shape having a longitudinal corner opening, spaced transverse plates fixed in said element, each said plate having three notches to form a serrated wedge-lock member approximating an outline of a letter M, with two corners of said M pointing toward said corner opening to define two lobes, and an

elongated sheet metal element spanning said corner opening and formed to have an M-shaped cross-section substantially fitting and forming a mating engagement with said wedge-lock member.

2. A corner stud comprising a preformed sheet-metal member, said member comprising a hollow column having, in part, a generally rectangular cross-section, said sheet-metal defining four walls of said column, two adjacent inner walls of said column having outwardly bent portions forming a longitudinal corner opening extending through the length of said column, spaced transverse plates mounted within said column, each plate having two substantially V-shaped lobes pointing in the direction of said longitudinal corner opening and having an M-shaped outline, and a sheet-metal cover member closing said opening, said cover having a cross-section corresponding to the M-shaped outline of said lobes and forming a tensioned mating engagement with said lobes and with said inner walls at the bent portions of said inner walls.

3. A corner stud comprising a preformed sheet-metal member, said member comprising a hollow column having, in part, a generally rectangular cross-section, said sheet-metal defining four walls of said column, two outer adjacent walls of said column meeting each other to form an outer corner of said column, and two inner adjacent walls of said column having portions of their respective wall-widths bent outwardly to form two rectangular flanges extending through the length of said column and

forming a corner opening along the inner corner of said column, spaced transverse plates mounted within said column, each plate having two substantially V-shaped lobes pointing in the direction of said longitudinal corner opening and having an M-shaped outline, and a sheet-metal cover member closing said opening, said cover having a cross-section corresponding to the M-shaped outline of said lobes and forming a tensioned mating engagement with said lobes and with said inner walls at the bent portions of said inner walls.

4. A corner stud as defined in claim 3, in which said two V-shaped lobes are positioned at an angle with respect to each other in a plane of said plate, said lobes having outer edges converging toward the outer corner of said column, and said cover having its wall portions, engaging said outer edges, bent inwardly for increasing the tensioned mating engagement with said lobes.

References Cited in the file of this patent

UNITED STATES PATENTS

863,779	Budd	Aug. 20, 1907
1,669,382	Smiley	May 8, 1928
1,825,010	Murphy	Sept. 29, 1931
2,113,067	McLaughlin, Jr.	Apr. 5, 1938
2,202,862	Mills	June 4, 1940
2,376,728	Shaer	May 22, 1945
2,590,123	Rapp	Mar. 25, 1952