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A. L. JACKSON

2,020,062

STRUCTURAL BUILDING DEVICE

Filed Sept. 30, 1931

Fig. 1.

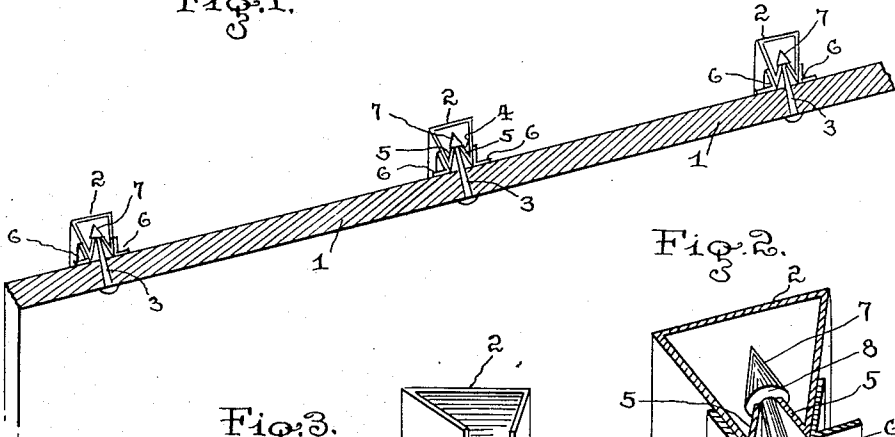


Fig. 2.

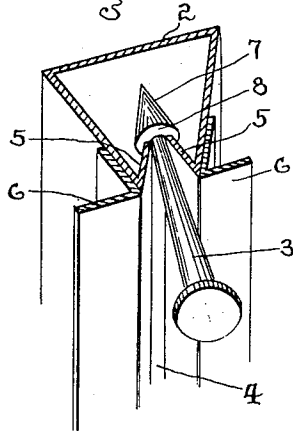


Fig. 3.

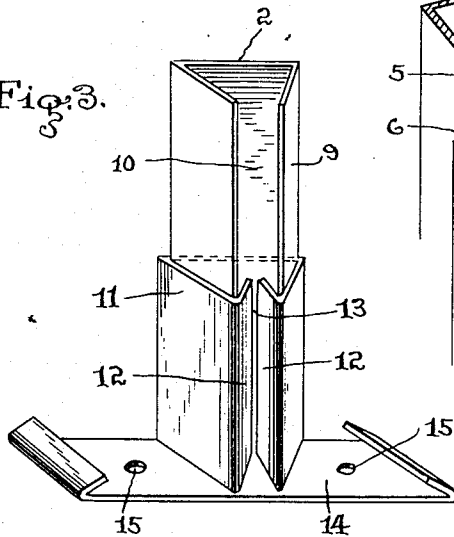


Fig. 6.

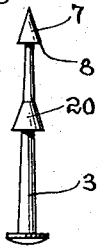


Fig. 5.

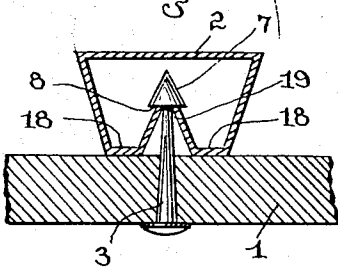
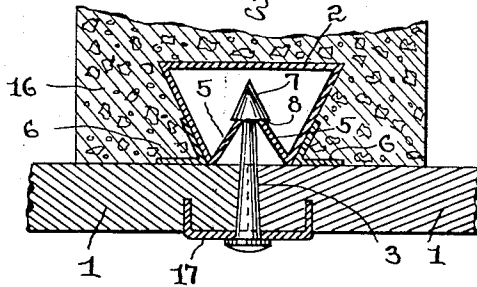


Fig. 4.



INVENTOR  
ALFRED L. JACKSON

BY his ATTORNEY

*Lawrence S. Ashley*

# UNITED STATES PATENT OFFICE

2,020,062

## STRUCTURAL BUILDING DEVICE

Alfred L. Jackson, New York, N. Y.

Application September 30, 1931, Serial No. 566,003

3 Claims. (Cl. 72—118)

The invention relates to improvements in structural building devices and has particular reference to metal stud supporting means applicable as the supporting struts and foundation means for all forms of side wall and ceiling surfacing materials such as the known types of insulating surfacing materials having an analogy to plaster board, sheet rock, cellotex, gypsum board and other insulating and plaster bases, metal casement surfacing plates, and similar ceiling surfacing materials and plaster bases together with the various types of metal lath and other forms of building media.

The invention contemplates the position within concrete bodies of vertically disposed metallic studs for wall and ceiling structures, or the application to floor supports of either metal or wood of transversely extending struts or studs, formed primarily of channel metal carrying sections having mounted on the respective ends thereof channel sleeve sections or collars provided with floor and ceiling shoe brackets by which said studding is attached to floor and the ceiling super-structure, said sleeve sections or collars being correspondingly formed with the contour of said studding and having formed in its metallic edges thereof inverted V shaped binders with which suitable matched or shouldered stud nails engage when driven through the wall or ceiling surfacing material, or said studding may have formed therein throughout its length, by turning in the converted edges thereof to form the attaching spring like or flexible channels to receive such wall, ceiling or partition surfacing materials.

The invention furthermore may be used as studding in masonry or solid concrete structural work, by having same imbedded therein during the pouring thereof in mold form providing in this instance means eliminating all wood supporting structure thereby producing complete fireproof, and economic reception structure for any form or type of both side wall partition and ceiling surfacing materials.

In the following there is described the general embodiment of the invention the features thereof being clearly defined hereinafter in the claims.

In the drawing forming part hereof, Fig. 1 is a sectional view in perspective disposition of a wall facing board showing a series of furring channel supporting or partitioning studs the edges of which are reinforced by means of like disposed channel straps, and the attaching of said facing board insulating or plaster base to said studs by means of specially designed double

headed nails; Fig. 2 is a perspective view partly in cross section of one of the supporting studs of the form or type of structure shown in Fig. 1; Fig. 3 is a perspective view of a modified form of wall stud, having mounted thereon an attaching collar or sleeve and a floor or ceiling shoe bracket for fastening the same to either a floor or a ceiling; Fig. 4 is a cross sectional view of a poured or mold form of concrete super-structure having imbedded therein the form of stud or shaper employed as a floor or ceiling supporting means similar to the structure employed in said Fig. 1; Fig. 5 is a modified form of supporting stud of the V shaped formation having the front face flattened and its edges bent inwardly to form the attaching channel for the double headed nail facing material attaching means; and Fig. 6 is an elevation of one form of double headed nail showing the addition of an attaching shoulder for fastening facing materials of varying thicknesses.

Similar numerals of reference indicate similar parts throughout the several views of the drawing forming part hereof.

In the drawing 1 designates a section of an insulating plaster base wall or ceiling surfacing board such as cellotex, wall board, sheet rock or other insulating plaster base the like attached to vertically disposed channel studs 2 by means of double headed nails 3. Stud 2 are made of sheet metal struts of channel form having their converging edges bent back toward the bodies thereof to form an inverted V shaped aperture or slot 4, said flanges 5 thereof adjacent their front portions thereof having fastened thereto reinforcing and facing straps 6 against which said board insulation or plaster base 1 engages nails 3 thereof having formed on their inner ends conical heads 7 forming shoulders 8 which engage the extreme edges of the flanges 5 of said studs, the tendency thereof being that since said edge flanges 5 are flexible the double headed nails 3 will fasten said board 1 securely to said studs and hold same in permanent position thereon thereby eliminating all change of buckling, or expansion and contraction of said surfacing material.

Studs 2 may be formed of the single type of channel 9 shown in Fig. 3 of the drawing of V shaped disposition with an open edge 10 and having mounted thereon similarly shaped sleeves or collars 11 having their edge flanges 12 invertedly projecting in the open edges 10 thereof to form gripping apertures 13 said sleeves or collars 11 having either attached thereto or formed therewith ceiling or floor or partition supporting and

attaching shoe brackets 14 provided with apertures 15 for fastening purposes.

The stud structure shown in Figs. 1 and 2 of the drawing may be employed as studding in poured or molded concrete structure 16 and in case of the abutting edges of boards 1 a bridge clip 17 may be employed to better finish a wall or ceiling plaster base, insulating, a surfacing material where both joints occur.

Referring to Fig. 5 of the drawing the form of stud 2 as employed may be of the V shaped type of channel having its front edges 18 thereof flat against which board 1 rests in its attachment, the fastening channel aperture 19 thereof being formed integrally with the walls of said studding 2 to simplify and economize the structure in its fabrication.

Double headed nails 3 may be used in the method of structural erection described herein or in case of varying thicknesses or gages of facing material such nails may have formed in or on the shank portions thereof one or more collars 20 for engagement with the fastening grooves of any type of metal supporting stud. Nails provided with longer shank portions may be used where wood facing is added to the surfacing structure utilizing the form of attaching studs described herein.

It is apparent that the structure as is herein shown and described may be varied in many ways without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent of the United States is—

1. A device of the character described comprising

a metal V shaped studding for building partitions having its edges flanged to form an inverted V shaped reception slot, a wall facing material mounted thereon, and double headed nails projecting through said material and engaging the latter by one of said nail heads, the inner head of said nail engaging said reception slot in said stud to support said material thereon.

2. A device of the character described comprising a metal V-shaped studding for building partitions having its edges flanged to form an inverted V shaped reception slot, base plates provided with V shaped collars arranged to support said metal studding, a wall facing material mounted thereon, and double headed nails projecting through said material, the inner heads thereof interlocking upon the edges of the flanges of said studding and projecting through the slots in said studs, the outer ends thereof engaging and supporting said wall facing material.

3. A device of the character described comprising a structural studding for building partitions consisting of V shaped stud members having their edges flanged to form reception apertured slots, a wall facing member arranged to be disposed thereon, and double headed nails, the inner heads of which engage the edges of the flanges of said studs, and extend into the slots therein, the outer heads thereof engaging the surface of said facing material, the shanks of said nails projecting through said facing material.

ALFRED L. JACKSON.