Sept 17, 1957 F. H. SAMPSELL 2,806,261

DRY WALL OPENING FINISH TRIM

Filed March 25, 1952

Fig. 1.

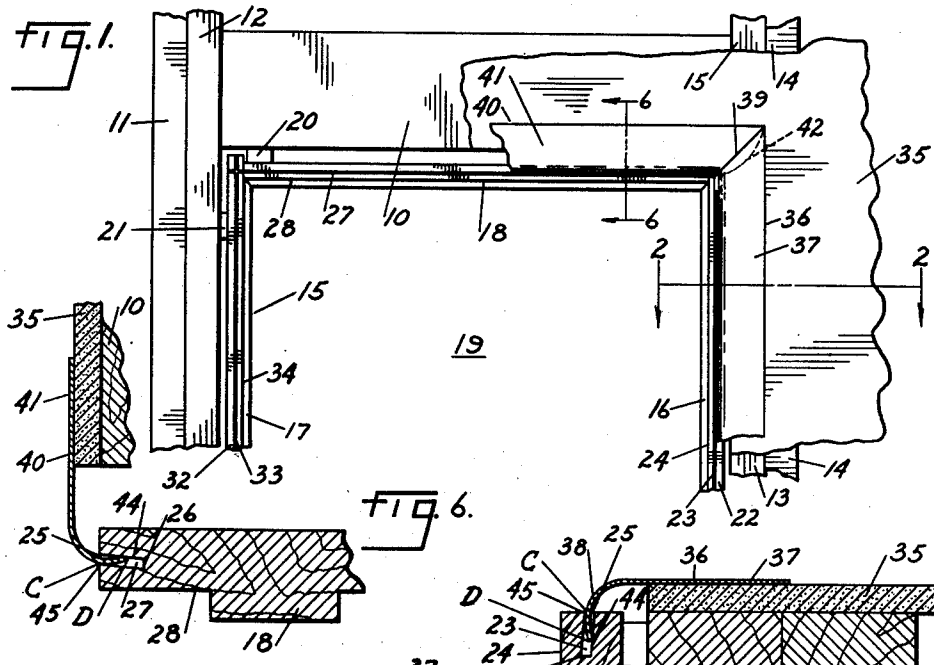


Fig. 6.

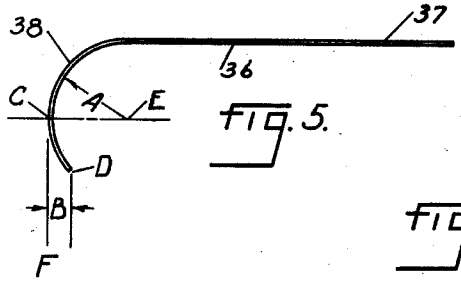


Fig. 5.

Fig. 2.

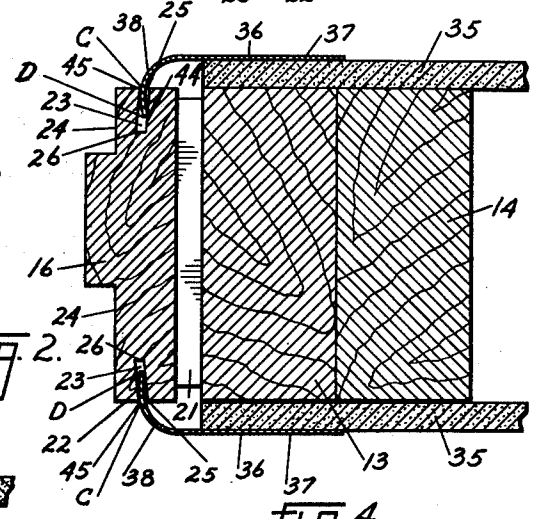


Fig. 4.

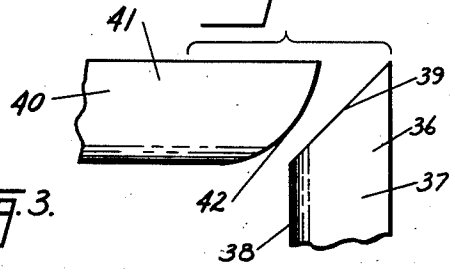
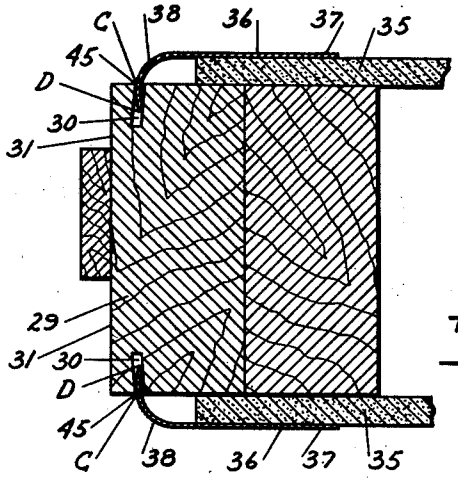


Fig. 3.



INVENTOR,
FREDRICK H. SAMPSELL,
BY Herbert A. Meinhart,
ATTORNEY.

United States Patent Office 2,806,261 Patented Sept. 17, 1957

2,806,261

DRY WALL OPENING FINISH TRIM

Frederick H. Sampsell, Indianapolis, Ind., assignor, by direct and mesne assignments, to Ten Point Trim Corporation, Indianapolis, Ind., a corporation of Indiana

Application March 25, 1952, Serial No. 278,425

1 Claim. (Cl. 20—74)

This invention relates to means for trimming or finishing around openings through a construction wall of a buiding. Reference is made to a co-pending application by William F. Parrish, Jr., et al., Serial No. 767,270, filed August 7, 1947, terminating in Patent No. 2,686,422, issued August 17, 1954.

The invention involves a metalic trim wherein there are no nails or other positive securing devices employed, and the trim is held securely in position by distortion of one end to induce a compressive engagement by the major portion of the trim with the face of the wall.

There are many advantages of the invention, a primary one of which is that the trim may be used either in conjunction with a door frame or a window frame set in the opening, or directly with the construction framework which defines the margin of the opening. The trim once set into position is securely held against any accidental displacement, and in fact requires considerable prying and force to even start its removal. A further important advantage of the invention is that it may present to the observer the appearance of a miter joint at the corners of the opening, without any actual miter joint being formed, and without opening at the joint under expansion and contraction. There is the great advantage of being able to finish the wall before the trim is applied and then setting the trim quickly in place without any any way driving elements such as screws or nails through the plaster finish or whatever finish may be employed on the wall.

As indicated in the title of this invention, the invention is particularly meritorious in its use upon so-called dry-wall construction where the wall is made out of studding covered with a plaster wallboard in the absence of any wet plaster having been applied thereto.

These and many other advantages of the invention will become apparent to those versed in the art in the following description of one particular form as illustrated in the accompanying drawing, in which,

Fig. 1 is a view in elevation of an upper portion of an opening with various elements broken away to disclose the construction;

Fig. 2 is a detail on an enlarged scale in transverse section on the line 2—2 in Fig. 1;

Fig. 3 is a like detail in transverse section showing a modified form of the construction;

Fig. 4 is a detail in elevation of the horizontal and vertical trim elements in disassembled relation;

Fig. 5 is a view on an enlarged scale, in end view through a trim member; and

Fig. 6 is a detail in vertical section on the line 6—6 in Fig. 1.

A standard construction of a wall around an opening is illustrated in Fig. 1, wherein there is the usual header 10 supported between vertical studding 11, 12 and 13, 14. Within the opening defined by these members, a frame generally designated by the numeral 15 and having the vertical elements 16 and 17 and a transverse member 18, is set into the opening generally defined by the numeral 19. Nor-

mally this frame 15 would be spaced by shims or blocks 20 and 21 from the header 10 and the studding 12 and 13, so that the frame 15 can be squared and properly set in the opening 19 and secured to those members 10, 12, and 13, to have the side members of the frams 15, namely 16 and 17, vertically disposed and the upper member 18 horizontally disposed at right angles thereto.

Through the edge 22 of the vertical member 16 there is formed a saw kerf 23 to extend in parallel relation to the faces of the member 16, and to extend vertically entirely throughout its length. A peculiarity of this saw kerf 23 is that it is inclined as shown for example in relation to the member 16, Fig. 2, to the face 24 so that the opening 25 is spaced further from the face 24 than is the inner terminal end 26 of the kerf. The angle of this inclination from the face 24 is made to be substantially five degrees in relation to that face 24.

In like manner, the transverse member 18 is provided with a groove or saw kerf 27 to extend entirely across its face edge in parallel relation to the underface 28 of that member 18. This kerf 27 is likewise disposed at five degrees to the face 28, the kerf inclining upwardly away from the face 28.

Where it is found advisable to omit the frame 15, particularly in order to permit more economy in the building, the stud 29 which would correspond to the stud 13 in Fig. 1 is itself grooved by forming the kerf 30 at the same five degree angle, inclining the kerf faces five degrees away from the face 31 of that stud 29.

Referring again to Fig. 1, the other vertical upright member 17 of the door frame 15 is likewise provided along its face edge 32 with a saw kerf 33 turned at the five degree angle in relation to the face 34 of the member 17. This kerf 33 runs throughout the entire length so that the closed end of the kerf, that is the inner end, is nearer the face 34 than is the opening through the face edge 32.

The studding has wallboard 35 carried thereover and secured thereto in the usual manner. Normally, for dry wall construction, the plaster board 35 is substantially one-half inch thick.

For a half inch thickness of wall 35, vertical trim pieces 36 are formed to have each a face portion 37 of the width desired to overlap the wall 35. This flat portion 37 is the width of the trim plus a turned over marginal portion 38 which, for the half inch wall, has a one-half inch radius, this being the radius A as indicated in Fig. 4, from a center E which is spaced one-half inch from the flat portion 37. The curved portion 38 is continued around by this radius A from the flat portion 37 across the line C—E which is parallel to the portion 37 to terminate at the point D. This point D is spaced from a tangential line C—F by a distance B, which for this particular thickness of wall 35 would be approximately one-eighth of an inch, the distance C—D being five-sixteenths of an inch. In this relationship, the trim piece 36, in cross-section, assumes the form of the capital letter J.

The upper end of each of the vertical trim pieces 36 is cut on a forty-five degree line 39, in right and left hand manners. As indicated in Fig. 4, the line 39 is for the right hand piece 36. Then a top or header piece 40 is formed to have the same flat vertical width 41 equivalent to the width 37 of the piece 36.

The ends of the piece 40 are not cut on a straight line, but instead are provided with the curved end edge 42, Fig. 4, the purpose of this curved line being indicated below.

In applying these pieces to the opening 19, the header piece 40 is applied first by having the curved portion by its edge D inserted in the saw kerf 27, to have that portion forced on into the kerf until the flat area 41 is brought up snugly against the plaster board 35. Then

the vertical trim **36** is applied in like manner to have its terminal edge D inserted into the kerf **23** to bring its flat portion **37** up against the wall **35**. In so doing, the edge **39** extending diagonally upwardly across the upper end of the piece **36** is brought into overlapping relation on the extreme right hand end of the header piece **40** so that the curved edge **42** underlaps the upper end of the piece **36** such as is indicated by the dash line in Fig. 1. Thus, regardless of expansion of the pieces **36** and **40**, the diagonal line **39** will always be apparent although it is largely concealed when painted, but in any event there will not be any open gap between those two pieces **36** and **40**.

There is a specific relationship to be held in the dimensions of the saw kerfs in respect to the curvature of the end portions **38** of the trim. For use of the trim having the one-half inch radius of curvature for the one-half inch plaster board, the saw kerf **23**, **27**, and **33** in addition to having the required five degree angle of inclination from the faces of the door frame or of the opening lining studding as indicated will be five-eighths inches deep from the edges of those frame members; and approximately three-thirty-second inches wide. The depth of five-eighths inches is only critical in respect to the depth of entrance therein of the line D, in that this line D edge of the trim in each instance must not at any time strike the bottom of the kerf so that there is provided a clearance therebetween. The portion of the curved area of the trim, for example the piece **36**, Fig. 2, which portion is indicated by the length C—D, is entered into the kerf in each instance to have the edge D slide over the inner wall **44** of the kerf in each instance while the outer face of the curved portion C—D will ride down over the corner **45** until the point C coincides therewith, it being understood, of course, that there will be a line of the trim coinciding with a line of the frame or studding indicated by the numeral **45**. In so forcing the length C—D into the kerf in each instance, there is a tendency to straighten out the curved portion **38**, and this tendency is resisted by the compressive bearing of the area **37** against the wall board **35**. The result is that due to the normal elasticity of the metal (the trim pieces all being made out of metal) there will be a very firm pressure maintained at all times between the lines C and D with the respective walls of the kerf in each instance, so that the line C will always be in intimate contact with the outer line or corner **45** of the frame member and thereby prevent any crack or gap showing therealong. This relationship between the lines C and D with the inclined walls of the kerf is necessarily maintained in order to set up that action of forcing the flat area **37** for the upright trim members and **41** for the horizontal trim member **40** into intimate, compressive contact with the wallboard **35** and at the same time maintaining the closed joint between C and the edge **45**.

Therefore it is to be seen that the trim pieces are each individually held very securely in positions so that there is no necessity and no provision made for otherwise securing these trim pieces in their respective positions. The entrance of the portions of these trim pieces into these kerfs align these trim members in respect to the door opening **19**, and there is no other fitting required. The pieces are initially "factory" made and are sent out onto the job so that no further work need be done on any piece.

While the relationships of the curved portion **38** have been defined specifically, the dimensions A and C—D and B will vary in accordance with the thickness of the wallboard **35**, such as, for example, when "wet" plaster is used in which instance the thickness of the plaster itself will be approximately three-eighths of an inch. The variations required will be those which will give the C—D dimensions sufficient to set up the engagement in the kerf in each instance to have the closed joint exposed while the inner terminal edge of the trim piece abuts the opposite wall of the kerf in order to set up the compressive action of the flat area of the trim piece in each instance against the finished wall.

Therefore, it is to be seen that the specific dimensions set forth are for examples only, and the invention is not limited thereto. In each installation, the edges of the opening frame members will lie in a plane including the side edges of the studding to which the wall such as the board **35** is added, so that the point D around the curved portion **38** will always be in that plane back of the wall face.

Therefore, while I have described the invention in the one particular form as now best known to me, it is obvious that variations in structure may be employed without departing from the spirit of the invention, and I therefore do not desire to be limited to that precise form beyond the limitations which may be imposed by the following claim.

I claim:

A building finish-trim construction about a wall opening comprising in combination a frame member having an edge side and a slot with spaced apart sides entering and extending longitudinally thereof; a wall panel disposed to one side of and substantially normally to said frame member terminating by an end adjacent said frame member side leaving said slot exposed, and extending by its thickness from the plane of said side; and an elastic length of molding having a major, planar area lapping over and along the outer side of said panel from its said end and having an arcuate portion directly merging with and continuing from and around back of said area, said arcuate portion having a radius of curvature equal approximately to the said panel thickness, having a circumferential length exceeding ninety degrees of arc, and terminating solely by an edge within said arc; said molding together with its planar area and its arcuate portion being J-shaped in cross-section; said arcuate portion being entered by its edge a distance within said slot positioning and retaining said planar area in compressive contact with said panel outer side solely by bending stress maintained in said arcuate portion by elastically resisted deformation thereof induced by a zone of said arcuate portion bearing against one of said slot sides and said portion edge bearing against the other slot side tending to straighten said arcuate portion; said molding being free of securing means between said frame member and said panel.

References Cited in the file of this patent

UNITED STATES PATENTS

1,065,810	Johnson	June 24, 1913
1,335,378	Knapp	Mar. 30, 1920
1,520,782	Swiney	Dec. 30, 1924
1,694,673	Thomas	Dec. 11, 1928
1,785,793	Starriett	Dec. 23, 1930
1,886,320	Waite	Nov. 1, 1932
2,097,796	Kennedy	Nov. 2, 1937
2,149,089	Herold	Feb. 28, 1939
2,686,422	Parrish et al.	Aug. 17, 1954