July 31, 1962 F. H. SAMPSELL 3,046,616

DOOR TRIM

Filed June 6, 1960 2 Sheets-Sheet 1

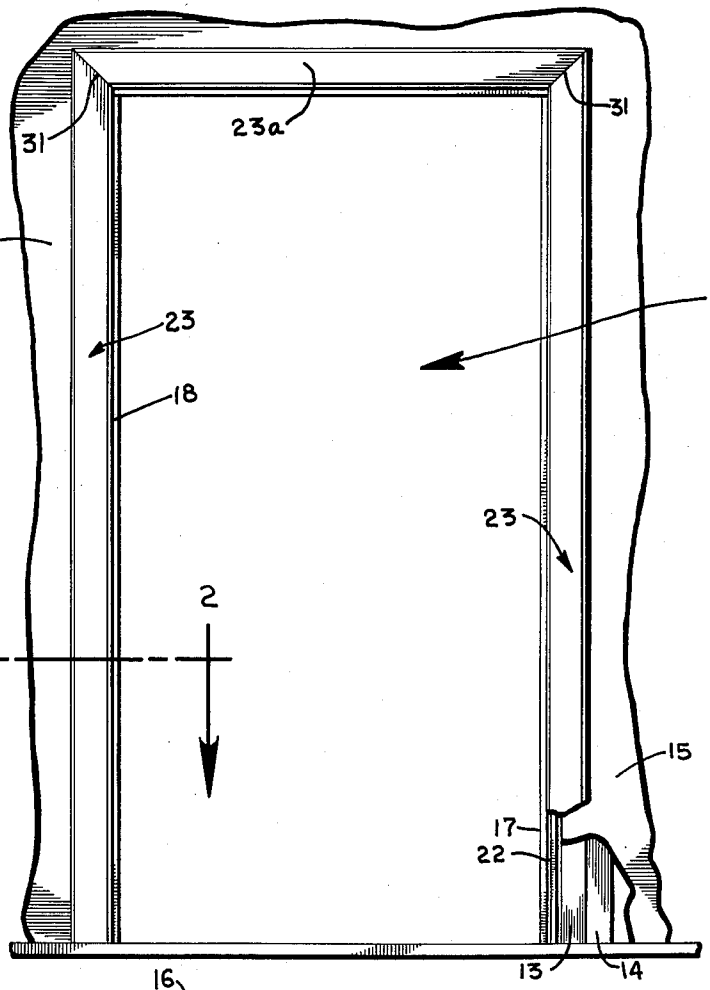


FIG.- 1

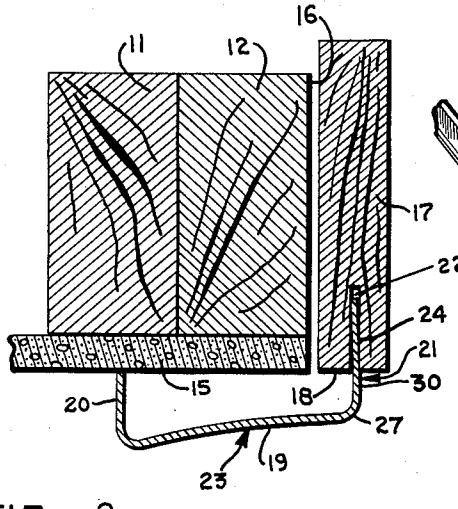
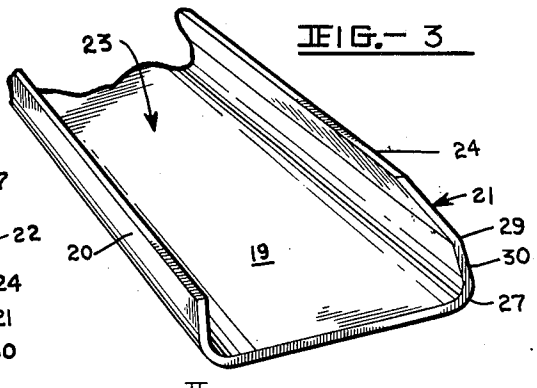


FIG.- 2

FIG.- 3



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FIG.- 4

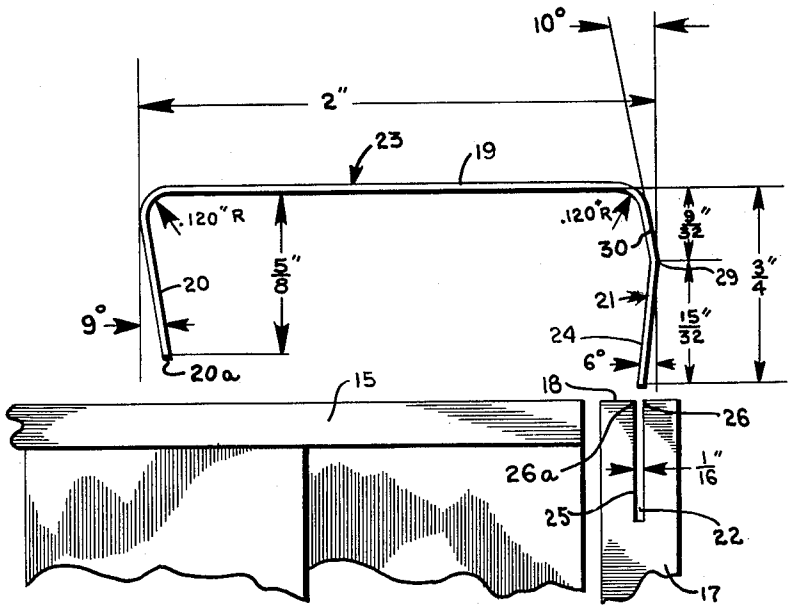
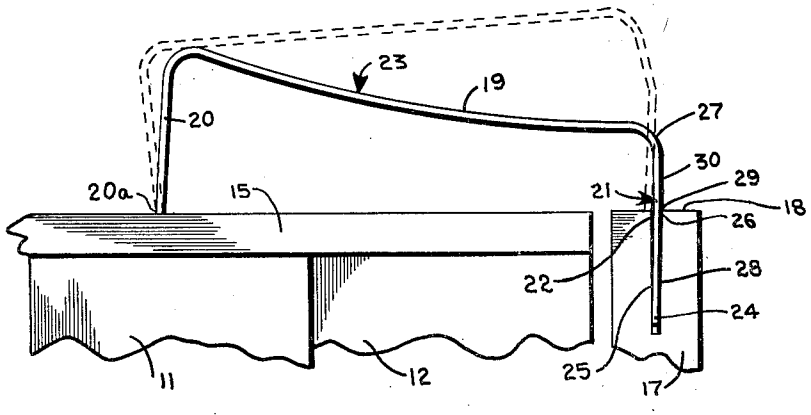


FIG.- 5



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DOOR TRIM

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This invention relates to a trim for an opening in a wall such as for doors and windows. The trim may be made out of metal preferably, or it may be made out of plastic. The structure which embodies the invention adapts itself to a "snap on" application before or after the walls may be painted or decorated.

It is a primary object of the invention to provide a trim which may be fabricated in pre-cut lengths and which may be pre-finished before it is applied to the wall about the opening.

A further primary object of the invention is to provide a trim which will have two different legs, one of which will fit within a kerf cut in the edge of a window or door jamb, and the other leg will rest upon the finished wall, and an intervening width of the trim will be required to buckle during the application of the trim to the wall in such manner that there is an elastic urge embodied in the trim itself for maintaining the one leg against the wall in firm contact therewith while the other leg will tend to be urged against the corner of the kerf which is visible after the trim is applied.

These and many other objects and advantages of the invention will become apparent to those versed in the art in the following description of one particular form, in which:

FIG. 1 is a door opening about which the trim of the invention is applied;

FIG. 2 is a view in transverse section on the line 2—2 in FIG. 1;

FIG. 3 is a view in perspective from the back side of a short length of the trim;

FIG. 4 is a detail in cross-section through a wall and an adjacent jamb with a section of the trim presented to the wall in disassociated relation; and

FIG. 5 is a view of the trim being applied.

Referring to FIGS. 1 and 2, a typical structure is illustrated wherein at the side of an opening generally designated by the numeral **10**, there are two pairs of studs **11**, **12** and **13**, **14**, these studs in the two pairs being nailed one against the other. Then across the edges of these studs is a section of either plaster or dry wall **15**, terminating at the face **16** of the stud **12**. Then a door jamb **17** is set along the face **16**, normally in spaced relation therefrom, to have an edge **18** in substantially the same plane as is the face of the wallboard **15**. It is the purpose of this invention to supply a trim which will be positioned over the edge portion of the wallboard face, across the gap between the stud **12** and the jamb **17**, to be retained by normal elasticity of the material of the trim.

In forming the trim out of metal, metal strips are formed into channels having a planar web **19** from the side portions of which extend a short leg **20** and a longer leg **21** throughout the length of the strip.

The jamb **17** has a kerf or slot **22** cut therein from the face **18** to a depth of at least one-half inch.

A length of the trim generally designated by the numeral **23** is cut to be long enough to extend throughout the entire length of the jam **17**, and also to give a length for a miter joint. Length **23** is brought up to have the leg **21** enter the slot **22** and the free edge of the leg **20** rest against the dry wall **15**, the width of the slot is substantially one-sixteenth of an inch and the thickness of the trim throughout is .0195 inche. In other words the width of the slot **22** exceeds the thickness of the leg **21**.

The leg **21** has its terminal edge portion **24** in a plane substantially six degrees to the web **19**. The leg **20** is inclined to and over the web **19** at an angle of nine degrees. The free edge portion of the leg **20** is brought against the wallboard **15**, FIG. 5, and then from the dash line position the trim is pressed to have the leg **24** enter the slot **22**, and under sufficient pressure, the leg **24** is caused to bear elastically by its free edge against the side **25** of the slot **22** and by an outer face portion of the portion **21** against the corner **26** of the slot. This corner **26** is the corner extending longitudinally along the slot opposite the upper relatively inner corner **26***a*.

Forcing the leg portion **21** into the slot **22** tends to rock the leg in the slot, in turn tending to increase the radius of curvature at the junction of the leg with the web **19**, this curvature being at the bend **27**.

Due to the width of the web **19**, the web itself tends to bend toward the wallboard **15** causing the web to take a concave shape in turn forcing the leg **20** under the yielding pressure set up by the bending of the web **19**, against the wallboard **15**. In other words, the initially planar web **19** assumes a cupped or concave surface throughout its length which causes the trim **23** to be frictionally retained by the leg portion **21** in the slot **22**, this portion **21** extending diagonally across from the face **25** inwardly of the slot from the corner **26***a*, to the upper outer corner **26**. The more the portion **21** is forced into the slot **22**, the more there will be a spring action set up by the bending of the web **19**.

The leg portion **24** of the leg **21** is substantially planar between the free edge **28** and a line **29** extending throughout the length of the leg. From this line **29** the leg extends through a narrow flat length **30** and thence through the radius **27** to merge into the web **19**. The leg portion **24** will be forced into the slot **22** until the line **29** coincides substantially with the line of the corner **26**.

Normally the transverse trim length **23***a* will be installed first in the same manner as indicated above, and then the vertically disposed trim lengths **23** will have a mitered end portion **31** lapping over the ends of the transverse lengths **23***a* to give a finish which will not open at the joints.

By reason of the cross-sectional shape of the trim lengths **23**, under variations in temperatures, and in swelling and drying of wood jambs, the trim **23** will maintain a tight and constant line of contact between the edge of the leg **20** and the wallboard **15**, and there will be a sealed contact between the leg portion **21** and the edge or corner **26** of the jamb, the contraction and expansion of the metal trim being accommodated through the web portion **19** in the concave contour. There is always a bending tension present in this web portion **19**, and there is no sliding action of the contactiing portion of the trim **23** over and along the dry wall **15**. This means that the dry wall **15** may have its surface prefinished and likewise the edge **18** of the jamb may be prefinished and the prefinished trim applied afterwards. This means a great saving in labor since the painter does not have to paint or finish the dry wall **15** and the jamb **18** to straight lines where the painted finish is liable to be carried up onto an adjoining member. The trim **23** will normally be prefinished as above indicated so that it does not need painting or finishing in any respect. The trim will extend outwardly from the dry wall **15** to give a simulation of a wood trim which is desirable in many parts of the country.

In order to achieve the tensioning of the trim member **23** to secure the inherent gripping action of the legs in the kerf **22** and on the wallboard **15**, certain definite relations in respect to dimensions must be maintained. The overall width of the trim piece **23** may vary somewhat, but the angularity, and length of the legs must be kept within rather close limits of the respective dimensions thereof.

These dimensions are set out in FIG. 4. The overall width of the trim **23** is two inches. The leg **20** is connected therewith through a radius of .120 inch and the leg itself extends from the web **19** at an angle of nine degrees from the perpendicular thereto. The overall length of the leg **20** from the inside surface of the web **19** to the extreme free edge of the leg is five-eighths of one inch. The leg **21** extends from the web **19** through a radius of .120 inch and outwardly from the underside surface of the web **19** an angle of ten degrees from the vertical. Measured to the line **29**, the dimension is nine thirty-seconds of one inch, and from that line, continuing on the normal line, the dimension is fifteen thirty-seconds to the free edge of the leg **21**. The overall length then of the leg **21** from the underside of the web **19** is three-fourths of one inch. The leg portion **24** extends from the line **29** back under the web **19** an angle of six degrees. The leg portion **24** is inserted into the kerf **22** a depth to have the line **29** coincide with the corner edge **26** as a gauge for the insertion.

As above indicated, by use of these two planar widths **30** and **24**, the leg **21** tends to be straightened carrying the width **30** to the left, as viewed in FIG. 5, tending to increase the radius **27**, but by reason of the leg **20** pressing by its lower end **20***a* against the dry wall **15**, the strip **23** will in effect rock on that edge tending to bring the leg **20** almost to a vertical plane in respect to the surface of the dry wall **15**, so that the web **19** curves downwardly between the two legs tending to maintain the curvature radii at each end to give the concave surface which provides the force through the elasticity of the strip **23** to retain the strip in position. The material of the strip **23** has a thickness as above indicated of .0195 inch and is made out of cold rolled steel carrying the trade name of Electro Galvanized.

Therefore while the invention has been described in the one particular form, it is obvious that some variations may be employed, particularly in the dimensioning of the angles and widths of the two legs as above indicated, the variations being within the range of a few thousandths of one inch. Therefore I do not desire to be limited to that precise form beyond the limitations which may be imposed by the following claims.

I claim:

1. The combination of a wall surface terminating by an edge at the margin of a wall opening, and a jamb in the opening along said edge and having an edge approximately in the plane of said wall surface, and said jamb edge having a slot entering its said edge extending longitudinally thereof with the side walls of the slot being parallel and at right angles to said jamb edge; with a flexible trim strip having a pair of legs and a web initially interconnecting said legs in the nature of a channel iron; one of said legs extending through an angle to and under said web to a free edge and the other of said legs being longer than said one leg extending from the web first outwardly from thereunder and, from a longitudinal line, thence inwardly; said other leg being forced into said slot tending to set up a bending stress between the web and said other leg; said one leg bearing by its free edge against said wall surface spacing said web therefrom; and said web being concavely shaped between the legs under said bending stress.

2. The structure of claim 1 in which said other leg has two approximately planar widths, one on each side of said line; said line constituting a slot insertion limit gauge.

3. The structure of claim 1 in which said one leg is approximately at right angles to said wall surface upon said insertion into the slot of said other leg.

4. The structure of claim 1 in which said web is initially approximately planar, said one leg is planar and extends under said web at an angle of substantially nine degrees and has a length of substantially five-eighths of an inch; and said other leg extends outwardly from under the web for substantially nine thirty-seconds of an inch, in a plane at an angle to said web of substantially 100 degrees, to a longitudinal line, and then from said line in a plane to a free edge for a distance of substantially fifteen thirty-seconds of an inch and at an angle of six degrees to said web and toward said one leg.

5. The structure of claim 4, in which said slot is substantially one-sixteenth of an inch wide, and is deeper than fifteen thirty-seconds of an inch.

6. A wall opening trim comprising in combination with a jamb set in said opening, and a wall surface extending from an edge of the jamb, the edge being in substantially the plane of said surface; said jamb edge having an entering slot extending longitudinally thereof and the walls of the slot being approximately perpendicular to said edge; of a flexible, elastic trim strip approximately channel-shaped with a central web and a pair of legs extending one each from longitudinal marginal portions of the web; one of said legs being planar; the other of said legs being longer than said one leg and lying in two planar portions, one portion extending from said web to terminate at a longitudinally extending line, and the other plane portion extending from said line angularly from the first plane portion back under said web; said other planar portion being entered within said slot to said line with said one leg bearing by its free edge against said wall surface; said other leg two planar portions being flexed along said line to come into a common plane and tend to carry said web into a concave shape between the two legs; said first leg extending initially under said web by a predetermined angle; said one planar portion of the other leg extending by approximately the same said angle outwardly from the web to be approximately parallel to said one leg; and said other planar portion extending from said line by an angle less than said first angle.

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