

Feb. 13, 1951

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2,541,768

FLEXIBLE MOLDING STRIP

Filed July 3, 1948

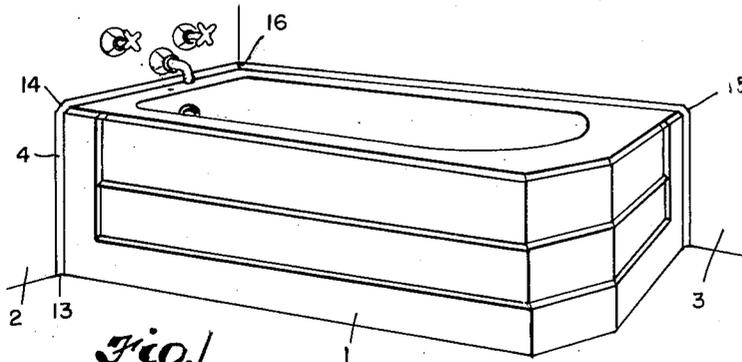


Fig. 1

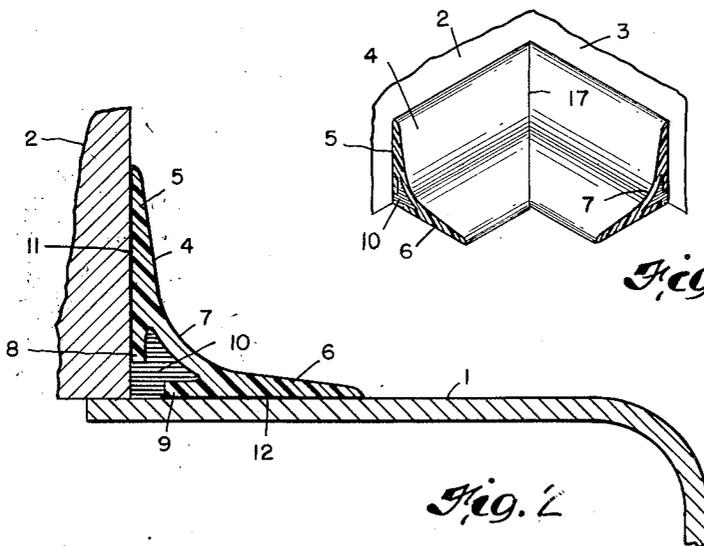


Fig. 2

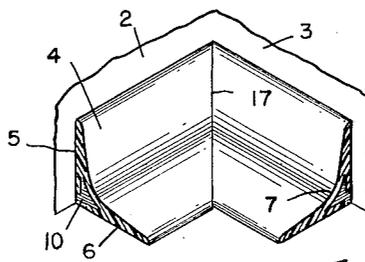


Fig. 3

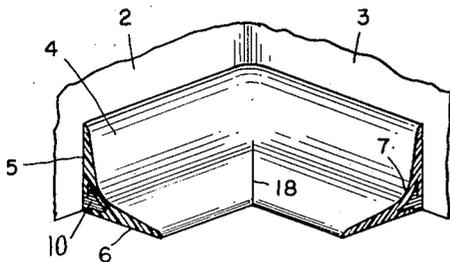


Fig. 4

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2,541,768

FLEXIBLE MOLDING STRIP

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Application July 3, 1948, Serial No. 36,953

3 Claims. (Cl. 20—74)

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The present improvements, relating generally as indicated to a flexible molding strip, are more particularly concerned with a sealing strip adapted for installation at the juncture of two surfaces for covering cracks thereat or cracks which may subsequently develop.

In bathrooms, for example, cracks invariably develop at the intersection of the wall and bathtub surfaces, such cracks not only being unsightly but permitting harmful seepage of moisture into the wall structure with resulting rotting and weakening thereof and emanation of foul odors therefrom. One common practice is to periodically putty or caulk such cracks, such practice, of course, being only a temporary solution to the problem. Furthermore, such filling of the cracks is a painstaking operation requiring painting or other finishing in order to match the adjoining surfaces.

Accordingly, it is a primary object of this invention to provide a flexible molding strip which is formed so that it may be securely attached at the intersection of surfaces such as the aforesaid.

Another object is to provide a strip which is sufficiently flexible to accommodate subsequent further enlargement of the cracks covered thereby.

Another object is to provide a strip which is sufficiently flexible and of shape such that it may be turned over sharp external corners without requiring cutting or mitering and may be turned into relatively short radius internal corners with only a half miter cut.

Another object is to provide a strip of cross section to provide a clearance at the intersection in which installed so that the intersection need not be sharp and free from irregularities.

Another object is to provide a strip of an interlocking form whereby to present a maximum adhesive surface with the adhesive locked therein so as to assure an inseparable bond between the strip and the surfaces to which the same is adapted to be cemented.

Another object is to provide a unique method of installing the strip which assures a leakproof joint thereof with the intersecting surfaces to which it is adapted to be applied.

Other objects and advantages will become apparent as the following description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawing setting forth in detail one illustrative embodiment of the in-

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vention, this being indicative, however, of but one of the various ways in which the principle of the invention may be employed.

In said annexed drawing:

5 Fig. 1 is a perspective view of a typical corner bathtub with the strip constituting the present invention disposed at the intersection of the tub surfaces with the bathroom walls;

10 Fig. 2 is a transverse cross section on an enlarged scale of the strip and the adjoining surfaces to which it is cemented;

Fig. 3 illustrates a miter fitting of the strip in sharp internal corners; and

15 Fig. 4 illustrates a half miter fitting of the strip into a small radius internal corner.

Referring particularly to the drawing, the numeral 1 denotes a typical corner bathtub intersecting the walls 2 and 3 of the bathroom. When the tub 1 is initially installed the walls 2 and 3 are, of course, finished off so as to meet the tub surfaces but because of subsequent settling, shrinkage and presence of moisture and steam at the intersection of the walls with the tub, cracks invariably develop at such intersections, which cracks if not promptly taken care of will progressively become larger and more unsightly permitting seepage of moisture into the walls.

In order to cover and seal such intersections and the cracks thereat or cracks which may later develop, the strip 4 constituting the present invention is cemented to the intersecting surfaces, said strip being formed with flanges 5 and 6 having their rear and bottom faces respectively cemented to the adjoining surfaces. Said flanges 5 and 6 are preferably of diminishing thickness toward their outer edges, as best shown in Fig. 2, and are joined together by a relatively thinner intermediate section 7 which forms a flexible fillet. The flanges 5 and 6 extend toward the intersection of the wall and tub surfaces beyond the intermediate section 7 and terminate short of the intersection to thus define lips 8 and 9 which with the section 7 form an interlocking recess 10 for adhesive, such recess preferably being of the dovetail form, as shown, in order to effectively resist separation of the strip from the wall and tub surfaces. Such intermediate section 7, as is apparent, provides for subsequent relative movement of the flanges 5 and 6 as occasioned by relative movement of the surfaces to which such flanges are cemented.

The strip 4 is preferably made of a flexible plastic material such as polyvinyl chloride, it being understood that other vinyl poly blends may also be used as well as rubber, synthetic rub-

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ber, thermoplastics, elastomers, copolymers, etc., the selection of any particular one being in accordance with the use to which the strip is to be put. In the present case the strip is of a water and alkali resistant material. One desirable property of the material from which the strip is made is that it be sufficiently flexible so that when it is once applied it may yield and follow any subsequent relative movement of the intersecting surfaces and therefore even though cracks covered thereby may subsequently become larger, the strip will not require further attention in order to preserve the neatness and sealing efficiency of the surface junction in which it is disposed. The strip should also be of material sufficiently flexible that the flanges 5 and 6 may stretch even over sharp external corners thereby eliminating the necessity for cutting the strip and specially fitting it over such corners.

The wall and tub contacting faces 11 and 12 of the flanges of said strip are preferably at an angle of about 135° so that when the strip is installed at intersections of less angle, usually 90°, the resilience of the material will tend to hold such faces in yieldable contact with the intersecting surfaces. However, insofar as the primary features of this invention are concerned, such faces may be at any desired angle between 0 and 180°, for example.

One method of installing the strip 4 comprises:

(1) Thoroughly cleaning and drying the wall and tub surfaces;

(2) Thinly and evenly spreading a vinyl base adhesive or other adhesive compatible with the material from which the strip is made onto the wall and tub surfaces covering an area approximating that of each flange 5 and 6 and allowing the same to thoroughly dry;

(3) Applying a second coat of adhesive to said surfaces and when the adhesive is in a tacky condition pressing the strip into place as with the thumb or forefinger. Forty-eight hours should be allowed for thorough drying. Excess cement may be removed as with a naphtha solvent.

Another method of applying the strip which produces even better results than the above-outlined procedure comprises:

(1) Cleaning and drying the wall and tub surfaces;

(2) Applying adhesive to the wall and tub surfaces and allowing the same to dry;

(3) Applying as with a brush applicator or the like an even coating of adhesive to the faces 11 and 12 and in the recess 10 of the strip and allowing the same to dry; and

(4) Applying a second coat of cement to the wall and tub surfaces and when tacky pressing the strip into place. The excess cement may then be removed with a rag dampened with nail polish remover or lacquer thinner by rubbing lightly on the strip and the wall and tub surfaces. This rubbing further assures a water-tight sealing point at the edges of the flanges 5 and 6.

In the exemplary installation in Fig. 1, if the strip is started at the point 13 the same may be turned over the corners 14 and 15 without cutting or mitering, the strip being sufficiently flexible that the flanges 5 and 6 thereof will stretch and continuously engage the wall and tub surfaces. However, at internal corners such as at 16 it may be necessary to provide either a full miter 17, as shown in Fig. 3, if the corner is relatively sharp, or a half miter 18 made as by cutting a notch in the flange lying in the plane of the bend if the corner is radiused as shown in Fig. 4.

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The strip 4 is preferably white in color but obviously may be made in any desired color to match or harmonize with the color scheme of the room.

In the present case, the strip 4 seals and covers cracks at the junction of the tub and wall surfaces thereby preventing steam and water from entering the cracks and causing damage to the woodwork and plaster walls. The strip may be applied to porcelain, wood, plaster, plastic tile, enamel, paper, and other types of surfaces in bathrooms and other rooms.

Although the strip 4 has been particularly described with reference to use in a bathroom as a seal between the wall and tub surfaces it may also be installed between the floors and the tub or around any other fixture in the bathroom. It may also be used as a trim or decoration in other rooms and may be painted over if desired. In any case, it will serve to neatly cover corner joints and any cracks which may develop therein, the flexible nature of the strip rendering the same continuously neat and effective to perform its intended functions.

Other modes of applying the principle of the invention may be employed, change being made as regards the details described provided the features stated in any of the following claims, or the equivalent of such, be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A flexible molding strip comprising two flanges adapted to be cemented to adjacent intersecting surfaces, an intermediate concave section joining such flanges at their inner edges and disposed to cover but be out of contact with the intersection of the surfaces, and lips substantially coextensive with said flanges lengthwise thereof and extending from the junctions of said flanges with said intermediate section toward the intersection to thus define an interlocking recess for cement for securing said strip to the intersecting surfaces, said lips lying in planes substantially coinciding with the respective flanges and likewise adapted to be cemented to the adjacent intersecting surfaces, said strip being of rubber-like material of flexibility such that when said flanges and lips are cemented to adjacent intersecting surfaces said intermediate section may yield to permit said flanges and lips to remain in fixed position cemented to the adjacent surfaces upon relative movement of the surfaces.

2. A flexible molding strip comprising two flanges adapted to be cemented to adjacent intersecting surfaces, an intermediate concave section joining such flanges at their inner edges and disposed to cover but be out of contact with the intersection of the surfaces, and lips substantially coextensive with said flanges lengthwise thereof and extending from the junctions of said flanges with said intermediate section toward the intersection to thus define an interlocking recess for cement for securing said strip to the intersecting surfaces, said lips lying in planes substantially coinciding with the respective flanges and likewise adapted to be cemented to the adjacent intersecting surfaces, said strip being of rubber-like material of flexibility such that when said flanges and lips are cemented to adjacent intersecting surfaces said intermediate section may yield to permit said flanges and lips to remain in fixed position cemented to the adjacent surfaces upon relative movement of the surfaces, said intermediate section being relatively thinner in cross-section than said flanges are at the

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junctions of said flanges with said intermediate section.

3. A flexible molding strip of rubber-like material comprising two angularly related flanges disposed to flex transversely to follow the contour of adjacent intersecting surfaces to which said flanges are respectively adapted to be cemented, the adjacent edges of said flanges being spaced apart and disposed relatively close to the intersection of the surfaces, each flange from one edge to the other presenting a relatively large area for firm cementing in place to the respective surface, and an intermediate concave yielding fillet section joining such flanges at points beyond such adjacent edges but relatively closer to such adjacent edges than to the other edges whereby to define an interlocking recess and clearance space

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for cement for further securing said strip in place to the intersecting surfaces.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

10	Number	Name	Date
	1,605,573	Stedman _____	Nov. 2, 1926
	2,090,588	Witsell _____	Aug. 17, 1937
	2,149,742	Miller _____	Mar. 7, 1939
15	2,303,864	Reasor _____	Dec. 1, 1942

OTHER REFERENCES

Modern Plastics (The Grafton Article), Sept. 1944, pp. 103 and 194.