April 28, 1936. E. E. BREY 2,038,637

EDGE BINDING

Original Filed Aug. 2, 1934

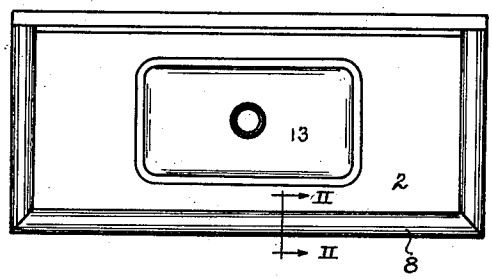


Fig. I

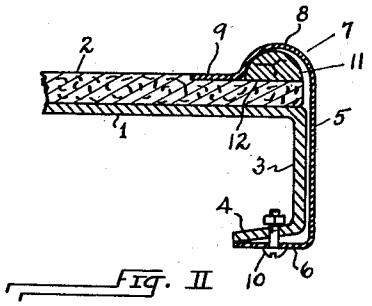


Fig. II

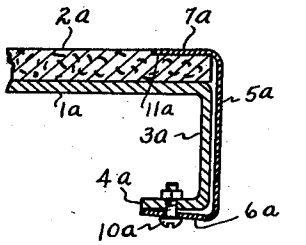


Fig. III

INVENTOR

Eugene E. Brey

by Christy and Wharton

attorneys

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EDGE BINDING

Eugene E. Brey, Pittsburgh, Pa., assignor to Tracy Manufacturing Company, a corporation of Pennsylvania

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7 Claims. (Cl. 311—107)

This invention relates to the edge binding of a composite structure, suitable for use as a sink top, or for use as a table top; this constituting a division of my co-pending application Serial No. 738,087, filed August 2, 1934.

For many reasons it is desirable in sink and table construction, and particularly in sink construction, to utilize for the sink or table top a composite material comprising a base of sheet metal, and a covering consisting of a substantial depth of some suitable yielding material. While various materials, more or less yielding in their nature, have been used, linoleum is the face covering most commonly employed.

As used upon a wooden base, it has been the custom to unite the linoleum covering to the wooden base by means of water-proof glue. Even if the linoleum covering be thus applied to wood, there is a tendency for the covering to curl or creep away from the base at the edge of the composite piece. This tendency is even more marked when linoleum is glued to a base of sheet metal, even though adhesive of the best waterproof sort be used in effecting the attachment of the covering.

It is, therefore, an object of my invention to provide a composite sink top, or table top, in which the composite material comprising a metallic base and a covering of linoleum, or the like, is neatly and adequately bound along its edges to provide a construction in which the covering is firmly bound to the base, and in which the edge binding is of pleasing appearance in itself, and gives a pleasing appearance to the sink top, or table top, as a whole.

Another object of my invention is to provide a composite, plane structure, for use more particularly as a sink top, in which the edge binding is raised to form a bead around the edges of the sink top, to prevent undesired drainage along the edges of the sink top, such beaded edge binding being adequately supported, and being of graceful appearance.

In the accompanying drawing Fig. I is a plan view of a sink top, comprising a drain board of composite material comprising a metal base and a covering of linoleum, or the like, showing the free edges of the structure bound by means of my preferred, beaded form of edge binding.

Fig. II is a fragmentary, cross-sectional view on an enlarged scale, taken on the line II—II of Fig. I, and illustrating the attachment of my preferred form of edge binding to the composite structure of the drain board.

Fig. III is a similar view, showing a modified, and simplified, form of edge binding.

Referring to Fig. II of the drawing in which my preferred form of edge binding is shown, reference numeral 1 represents the sheet metal base of a sink drain board, and reference numeral 2 represents a covering which is of linoleum, compressible and waterproof fibre board, micarta, or the like, but which desirably is linoleum. This covering 2 is adhesively attached to the sheet metal base 1, by a suitable adhesive, such as waterproof glue. As above explained, even though attached to the metal base by an adhesive of the most suitable grade, there is a tendency for the covering 2 to curl away from the base 1 at the edge of the composite structure, and there is also a tendency for the covering to creep on the base to extend a slight distance therebeyond. This creeping may be due either to relative expansion or contraction of the two elements of the composite drain board, or may result from a pulling away of the covering in one region, and an over-extension of the covering in another region. This figure of the drawing shows my preferred means for binding the edges of the composite structure as used for the drain board of a sink.

My edge binding is formed of light-gauge metal, which is resilient, and which is rust resistant. I have found certain resilient grades of stainless steel suitable for the purpose. The connection between the sheet metal base 1 of the drain board and the edge binding is provided by a skirt 3 depending along the edge of the sheet metal base 1 to form substantially a right-angle with the plane of the base. As shown in Fig. II, a flange 4 extends rearwardly and downwardly to form an obtuse angle with the skirt 3.

The edging itself is a formed strip comprising a body region 5, which extends vertically in assembly of the strip with the edge of the composite drain board. Extending rearwardly at right-angles to the lower terminal of body 5 is a flange 6. At the upper terminal of edging body 5 a flange 7 is extended rearwardly, and is bowed upwardly at 8 to provide a smoothly curved bead.

The entire vertical space between upper flange 7 of the edging strip and lower flange 6 of the edging strip is made very slightly less than the distance between the surfaces of the covering 2 and flange 4 of the sheet metal base to be embraced by the edging strip. In assembly, therefore, the edging strip is snapped into position, with the most rearwardly extending portion 9 of its flange 7 lying on the surface of the covering 2, and with its lower flange 6 engaging flange 4 on

the depending skirt 3 of the base. Engagement of the edging strip in this position is assisted by the difference in angularity between the base flange 4 and the flange 6 of the edging strip, and desirably a plurality of bolts 10, interconnecting the flanges 4 and 6, are applied at intervals along the length of the strip.

Along its edge the covering 2 is rabbeted to a depth equal to the thickness of the foot 9 of flange 7, which extends in a plane parallel to the plane of the covering 2. In mounting the edging strip at the edge of the composite structure, therefore, a countersunk effect is obtained, with the upper face of flange foot 9 lying flush with the upper face of covering 2. This countersunk mounting provides an engagement between the edging strip and the covering, which prevents the entry of moisture therebetween. Additionally, it provides a vertical engagement between the rearward terminal of the edging strip and the shoulder formed in the covering material positively to prevent edge creeping of the covering material relatively to the base.

Because of its upwardly bowed region 8, the upper flange 7 of the edging strip is out of direct contact with the covering 2 throughout a substantial portion of its lateral extent. If means were not provided to remedy this condition, there would be a tendency for the covering material to curl at its edge within the concavity provided by the bow of the flange. Also the upwardly bowed region of the edging strip, being unsupported, would be susceptible to deformation by blows and pressure. I, therefore, prior to positioning the edging strip on the drain board, adhesively attach a filler strip 11 to the chamfered face 12 of the covering. This filler strip 11 may be of wood, or other suitable composition, which readily may be made to adhere to the surface of the covering. As will be seen in Fig. II, it is formed with a plane under surface, to rest throughout on the face of the covering material, and is formed throughout the remainder of its sectional contour in conformity with the contour of the cavity within the bowed region 8 of the flange.

Filler strip 11, therefore, by interposition between the edge of covering 2 and the resilient edging strip, permits positive binding at the margin of the covering, and in its other function so supports the bow 8 of the edging strip as to prevent deformation of the strip in this region.

As indicated above, the form of edging strip construction shown in Fig. II is my preferred form for binding the edges of the composite body of a sink drain board. This is for the reason that the raised bead, provided along the edges of the drain board by the upwardly bowed region 8 of the edging strip, tends to prevent drainage of liquids over the edges of the drain board, so that the liquids may flow, or be swept, into the basin 13 of the drain board.

Fig. III of the drawing shows an edge binding which, because of the absence of a bead, is less desirable for use on a drain board of a sink, but which is suitable for binding desk or table tops formed of a sheet metal base, and a covering of linoleum, or the like.

In Fig. III of the drawing sheet metal base 1a has thereon, as covering, a substantial thickness 2a of linoleum or the like, adhesively attached to the base. Along its margin, covering 2a has a similarly chamfered region 11a in which lies an upper flange 7a, extending rearwardly from the body 5a of the edging strip. Flange 7a is not bowed upwardly as in Fig. II, but lies in the chamfered region 11a of the covering 2a, with its upper face flush with the upper surface of the cover, being mounted in countersunk relation to the covering.

Fig. III of the drawing also illustrates modification in the engagement between the edging strip and the sheet metal base of the structure. In this modification, skirt 3a of base 1a has a flange 4a extending at right-angles thereto, and flange 6a, extending rearwardly at the lower edge of the body 5a of the edging strip, forms an acute angle with the body of the edging strip. Bolts 10a positively interengage the flanges 4a and 6a.

In this modification difference in angularity between the lower flanges on the sheet metal base and on the binding strip is obtained by an arrangement of parts slightly different from that shown in Fig. II, but is functionally identical with the engagement shown in Fig. II. If desired, difference in angularity, as provided by flanges 4a and 6a, may be utilized for mounting the beaded edging strip as shown in Fig. II.

It will be noted that in either form of edging strip, a plane region of the binding strip definitely overlies and engages a plane zone of substantial width in the marginal region of the covering, firmly binding it to the sheet metal base. Also it should be noted that the rabbeting, to provide an inset marginal region of relatively great width, causes the inner edge of the binding strip flange to abut a shoulder at the inner edge of the rabbeting. These factors are of primary importance in giving an engagement of the covering to the base which definitely resists any tendency for the marginal edge of the covering to curl by pulling away from its engagement by the edging strip. The snap engagement of the edge binding with the cover and base is assisted by the difference in angularity between the lower flange on the depending skirt of the base. This difference in angularity tends the more firmly to pull the overlying flange of the binding strip down upon the upper face of the covering.

While linoleum is the preferred covering for the metal base of a sink, because its yielding nature tends to lessen breakage of fragile articles, other less yielding, waterproof, covering materials may be used. Micarta has been mentioned above, and there are various treated fibre boards, and resin base compositions, which may be satisfactorily employed.

I claim as my invention:

1. For use as an element of a sink a drain board of composite structure having a sheet metal base and a covering of waterproof and flexible non-metallic material cemented on said metallic base, said non-metallic covering being rabbeted along its edges to provide an inset marginal zone, a binding strip of light-gauge metal resiliently embracing said metallic base and said non-metallic covering in the region of its rabbeting, said strip being bowed transversely to present a concave surface to said covering, and a relatively rigid filler strip having a face contoured to fit the concavity of the binding strip and having a flat face arranged to bear upon the edge of said flexible covering positively to prevent edge curling thereof.

2. For use as an element of a sink a drain board of composite structure having a sheet metal base and a covering of waterproof non-metallic ma-

terial of substantial thickness on said base, said material being rabbeted along its edges to provide an inset marginal zone having a plane upper surface, a binding strip of light-gauge metal resiliently engaging beneath the sheet metal base of the structure and marginally engaging the covering, said binding strip being bowed transversely to present concave regional surface to said covering, and a filler strip having a face contoured to fit the concavity of the binding strip and having a plane surface adapted to bear upon the face of the covering in its terminal marginal region, said binding strip having a longitudinal plane region lying upon the plane upper surface of said rabbeted marginal zone with the upper surface of said region of the binding strip approximately flush with the upper surface of the covering disposed inwardly of said marginal zone.

3. For use as an element of a sink a drain board of composite structure having a sheet metal base and a covering of waterproof, non-metallic material of substantial thickness on said base, said material being rabbeted along its edges to provide an inset marginal zone having a plane upper surface, a binding strip of light-gauge metal resiliently engaging beneath the sheet metal base of the structure and marginally engaging the covering, said binding strip being bowed transversely to present a concave regional surface to said covering and having a longitudinal plane region lying rearwardly of the bowed portion of the binding strip upon the plane upper surface of said rabbeted marginal zone with the upper surface of said region of the binding strip approximately flush with the upper surface of the covering disposed inwardly of said marginal zone.

4. For use as an element of a sink or table a drain board or table top of composite structure having a sheet metal base and a covering of waterproof and flexible non-metallic material cemented on said metallic base, said flexible non-metallic covering being rabbeted along its edges, and a binding strip of light-gauge metal resiliently embracing said metallic base and said flexible covering in the region of its rabbeting, said strip being bowed transversely to present an overlying concavity housing the extreme edge of the flexible non-metallic covering, and said binding strip having a longitudinally extending foot projected inwardly from the base of the bowed portion thereof to lie flat upon the rabbeted edge region of the flexible covering and arranged thereby to present obstruction to creeping of the flexible covering by edge abutment with the shoulder of the covering formed by the rabbeting, the binding strip in the assembly providing a water-tight water-restraining edge binding resistant to creeping of the covering.

5. For use as an element of a sink or table a drain board or table top of composite structure having a sheet metal base and a covering of waterproof non-metallic material cemented on said metallic base, said non-metallic covering being rabbeted along its edges, a binding strip of light-gauge metal resiliently embracing said metallic base and said flexible covering in the region of its rabbeting, said strip being bowed transversely to present an overlying concavity to the extreme edge of the covering and a longitudinally extending foot projected inwardly from the base of the bowed portion and pressed flat against the surface of the non-metallic covering in the rabbeted edge region thereof and having its edge in edge abutment with the shoulder in the covering formed by the edge rabbeting thereof, whereby the binding strip provides a water-tight water-restraining edge binding resistant to creeping of the covering.

6. For use as an element of a sink or table a drain board or table top of composite structure having a sheet metal base and a covering of waterproof non-metallic material cemented on said metallic base, said non-metallic covering being rabbeted along its edges, a binding strip of light-gauge metal resiliently embracing said metallic base and said non-metallic covering in the region of its rabbeting, said strip being bowed transversely to present a concave surface to the rabbeted region of the covering, a longitudinally extending foot projected inwardly from the base of the bowed portion and lying flat against the surface of the non-metallic covering in the rabbeted region thereof and having its edge in edge abutment with the shoulder in the covering formed by the edge rabbeting thereof, and a rigid binding strip having a face contoured to fit the concavity of the bowed region of the binding strip and having its surface presented to the rabbeted surface of the covering shaped to match the shape of the region of the covering contacted by it.

7. For use as an element of a sink or drain board of composite structure having a sheet metal base and a covering of waterproof and flexible non-metallic material cemented on said metallic base, a binding strip of light-gauge metal resiliently embracing said metallic base and non-metallic covering along the edge thereof, said strip being bowed transversely to present concave surface to said covering, and a rigid filler strip in the concavity of the said binding strip and bearing against the surface of the said non-metallic covering, said filler strip having a surface contoured to fit the concavity of the binding strip and having a surface contoured to match the surface of the region of the covering which it contacts.

EUGENE E. BREY.