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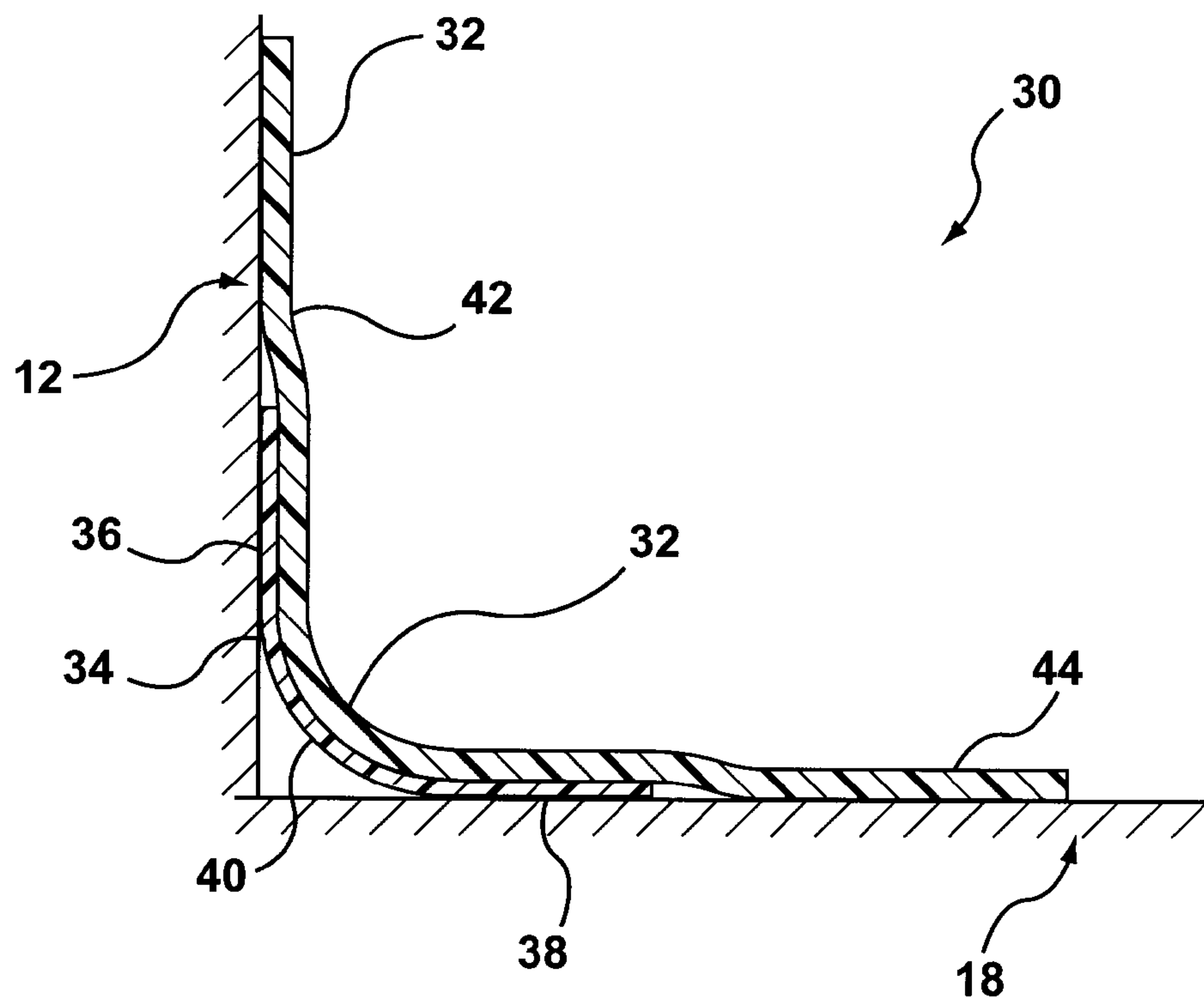
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(54) Titre : MOULURE POUR BORDURE DE PARQUET

(54) Title: FLOOR EDGE MOLDING



(57) Abrégé/Abstract:

A floor edge molding for use in forming a sanitary corner of resilient sheet flooring is disclosed. The molding comprises an elongate strip of flooring bonded to a generally L-shaped support member bonded to the concealed side of the strip, to support the strip of sheet flooring. The L-shape is formed such that the angles between the two arms of the molding is greater than 90°, such that the L-shape is deformed upon installation, in order to ensure a tight fit against the wall.

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ABSTRACT OF THE DISCLOSURE

A floor edge molding for use in forming a sanitary corner of resilient sheet flooring is disclosed. The molding comprises an elongate strip of flooring bonded to a generally L-shaped support member bonded to the concealed side of the strip, to support the strip of sheet flooring. The L-shape is formed such that the angles between the two arms of the molding is greater than 90°, such that the L-shape is deformed upon installation, in order to ensure a tight fit against the wall.

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Title: FLOOR EDGE MOLDING**FIELD OF THE INVENTION**

The present invention relates to floor edge moldings for use with resilient sheet flooring.

5 BACKGROUND OF THE INVENTION

When resilient sheet flooring, such as sheet vinyl, rubber or linoleum, is used in institutional settings such as hospitals or cafeterias, it is desirable for the flooring to form a so called sanitary corner
10 between the floor and the walls. With such a sanitary corner, there is no junction of different materials, or of different pieces of the same material, at the intersection between the floor and the walls. With a sanitary corner, a high level of cleanability of the floor can readily be
15 achieved, as there is no place for dirt to accumulate.

Traditionally, when using sheet flooring, a sanitary corner is obtained by placing a coved fillet strip, generally made of rubber, PVC or other elastomeric material, in the intersection between the floor and the
20 wall, and rolling the flooring material up over the fillet strip so as to extend a short distance up the wall. With this method, the fillet strip serves both to support the flooring and to cause it to assume the form of a smooth curve, thus minimizing potential breakage of the sheet
25 flooring during installation.

While this method of construction forms an adequate sanitary corner, it does have several drawbacks. It is relatively labor intensive, as the fillet strip must first be nailed to the intersection of the floor and the
30 wall and then the flooring carefully rolled up and over the fillet strip. Also, because of the difficulty in making inside and outside corners using this traditional method, skilled workers are necessary, thus increasing the cost of installation.

With the traditional method of forming a sanitary corner of sheet flooring, it is difficult to form a sanitary corner around doors and other openings, as the thickness of the fillet strip means that the flooring must
5 be ramped up the door frame, which is difficult to satisfactorily achieve. Also, with such ramping, a blow from a cart or gurney such as those extensively used in hospitals can easily cause the flooring to become loose, thus destroying the sanitary condition of the corner.

10 Further, as the fillet strip is made of a soft material, if chairs, hospital carts, or gurneys bang into the corner, the fillet strip will dent and the sheet flooring will crack, causing the corner to become unsanitary. This is a major concern in hospital
15 installations, especially in areas such as operating rooms, where being able to maintain sanitary conditions is essential.

One attempt to overcome the above noted problems in the traditional method was the provision of an L-shaped
20 reinforced molding or skirting, comprising a strip of flooring material reinforced along its length with either fiberglass or aluminum. While such moldings did provide some advantages over the traditional method, particularly in ease of installation, such products had notable
25 shortcomings, particularly their rigidity and inflexibility. Because these moldings were rigid and unyielding, they were not able to satisfactorily adapt to the irregularities of wall, floors and the intersections therebetween inherent in usual construction techniques.
30 For example, if the wall and the floor were not perfectly perpendicular, the installation of these products would result in gaps between the molding and the wall or floor, due to the rigidity of the molding. Because of these shortcomings, these prior art reinforced moldings were not
35 commercially accepted.

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SUMMARY OF THE INVENTION

In accordance with the present invention there is provided a molding for installation against two adjacent and generally orthogonal surfaces, the molding comprising:

- 5 an elongate strip of a resilient material, and a support member bonded to said strip such that when said molding is installed against the generally orthogonal surfaces, said support member is between said strip and the intersection of the generally orthogonal surfaces,
- 10 said support member comprising a web, a flange and a curved support surface disposed therebetween, the curvature of said support surface chosen such that said strip and said member can be bonded without failure of said resilient material,
- 15 said support member being constructed of a deformable material having sufficient malleability to be deformable into alignment with the generally orthogonal surfaces.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig 1A is a bottom view of a floor edge molding according to the present invention.

Fig. 1B is a top view of the molding of Fig. 1A.

Fig. 2 is a cross-sectional view of a sanitary corner formed with the molding of Fig. 1.

Fig. 3A is a front perspective view of a top cap for use with the molding of Fig. 1.

Fig. 3B is a perspective view showing the installation of the molding of Fig. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As shown in Figs. 1A and 1B, in accordance with the present invention there is provided a pre-formed elongate floor edge molding 30 for use in forming a sanitary corner between a wall and a floor. The molding 30 comprises a strip 32 of a resilient material, such as sheet vinyl or linoleum, and a support member 34. The support member 34 is bonded to the back of the strip 32, i.e. such that when placed adjacent the intersection between a wall and a floor, the support member 34 will be between the strip 32 and the intersection of the wall and the floor.

In the preferred embodiment, the support member 34 is generally L-shaped, and comprises a web 36, a flange 38 and a curved support surface 40 disposed between the web 36 and the flange 38. The support surface 40 fully supports the strip 32 over the extent of the support surface 40 in a plane transverse to the conjunction of the wall and floor as shown in Fig. 2. The curvature of the support surface 40 is chosen such that, when bonded to the support member 34, the strip 32 will not break, crack or otherwise fail, as any such breaks or cracks would, in addition to being unsightly, render the molding unsanitary. Also, for a "clean" appearance of the molding, it is generally desired that the curvature be as small as possible, while meeting the criterion set out above. Depending on the material of construction of the support member 34 and the resiliency of the strip 32, the support surface 40 will generally have a radius of curvature of less than 1 in., preferably between $\frac{1}{4}$ and $\frac{1}{2}$ in.

As will be appreciated by those skilled in the art, walls and floors generally have a variety of irregularities, even if great care is taken in their construction. For example, the angle between a wall and a floor usually is not a perfect right angle and further the angle can vary over the length of a wall. Also, the wall can bow in at points and out at others, and similarly the floor can have dips or ridges at various locations.

Because of such irregularities, the support member 34 is constructed of a material having sufficient

malleability to be deformable into alignment with the wall and the floor, to cover such irregularities. The material of construction of the support member should have little or no "memory", or tendency to return to a previous shape.

5 If, for example, the wall bows in, it is desirable for the support member to be sufficiently malleable for the molding to easily assume the shape of the bow, for instance upon application of pressure, and remain permanently in this shape, so as not to become detached
10 from the wall at some later time. Preferably, the support member 34 is made of utility grade aluminum. While the optimal thickness of the support member 34 depends on the material of construction, the preferred thickness for utility grade aluminum is 1/32 in.

15 In the preferred embodiment, the web 36 and the flange 38 are offset from each other by an angle greater than the included angle between the wall and the floor. With such an offset, upon installation of the molding 30, deformation of the support member 34 occurs, thereby
20 ensuring that the web and the flange fit tightly against the wall and the floor, thus covering any irregularities. If the wall and floor are generally perpendicular -i.e. perpendicular except for those variations inherent in usual construction techniques- the offset is preferably
25 between 90° and 100° and most preferably between 94° and 97°.

As shown in Figs. 1B and 2, the strip 32 includes a wall portion 42 and a floor portion 44, which upon installation of the molding 30 are adjacent the wall
30 and the floor, respectively. The wall portion 42 and the floor portion 44 are sufficiently wide that the free ends of the portions 42, 44 are able, due to the resiliency of strip 32, to lie flush with and flat against the wall or the floor -i.e. the free ends are not raised up off of the
35 wall or the floor. With such a configuration, the floor portion of the molding will be the same height as the main portion of the sheet flooring (the portion away from the

walls), thus allowing for a smooth, level junction between the molding and the main portion of the flooring, as shown in Fig. 2.

While the widths of the wall and floor portions
5 of the molding will vary depending on the specifications of the particular installation, it is common for the wall portion to extend up the wall a distance of about 4 to 6 in., and for the floor portion to extend along the floor a distance of about 3 to 20 in. With such a molding, the
10 support member is sized such that the web and the flange each have a width, as measured from the virtual intersection between them, of about 1 to 3 in.

The support member 34 preferably extends substantially the length of the strip 32 and most
15 preferably has a length equal to that of the strip 32. While the molding can be any desired length, a common length is 10 feet, especially for use in large installations.

Moldings in accordance with the present
20 invention can be manufactured as follows. First, a strip of aluminium, for example, is bonded to the back side of a strip of resilient sheet flooring, such as linoleum, such that the aluminum extends along the length of the strip. The aluminum is preferably bonded to the flooring
25 by contact cement or other similar adhesive. Generally, the aluminum will be bonded to the flooring strip such that, when the molding is formed, the web and the flange of the support member are substantially equal in width.

Once the support member has been securely
30 adhered to the flooring strip, the molding can then be placed in a sheet metal brake, and bent to achieve the desired angle between the web and the flange. Preferably, a computerized brake is used to ensure that a uniform pressure is applied at all points along the molding.
35 Depending on the thickness of the flooring and the type and thickness of the support member, it may be necessary to over bend the molding, to compensate for the support

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member springing back to a flatter shape, upon release from the brake.

The method for installing floor edge molding according to the present invention in a new floor installation will now be described with specific reference to Figs. 3A and 3B. Fig. 3A shows a top cap 50 for use with the molding of the present invention. The cap 50, which is preferably made of aluminum or stainless steel, is of an inverted J-shape and has a plurality of perforations 52.

As shown in Fig. 3B, a coating of adhesive 54, 56 is first placed on the wall 12 and the floor 18 in the area to which the molding 30 is to be affixed, the coating of adhesive extending up the wall 12 for the height of the wall portion 42 and extending out along the floor 18 at least the width of the floor portion 44. The molding 30 is then pressed down against the floor 18 and against the wall 12, causing the support member 34 to be deformed to fit tightly against the floor and the wall. The wall portion 42 is then pressed against the wall and then pulled back, such that some of the adhesive adheres to the back of the wall portion 42. The perforated top cap 50 can then be placed over the top edge of the wall portion 42, and the wall portion, with the top cap attached, then pressed against the wall. With the perforated top cap 50 shown in Fig. 3A, the adhesive flows through the perforations 52, securely bonding both the top cap and the top edge of the wall portion of the wall. If desired, a bead of silicone or other caulking may then be run along the top edge of the top cap, to ensure that dirt and moisture cannot accumulate thereon.

Once the molding has been installed, the main portion of the flooring, i.e. the generally rectangular portion away from the walls, may be installed in the normal manner. The junction between the molding and the flooring may be finished as follows. The main portion of the flooring is preferably installed such that there is

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a small overlap onto the molding. The flooring and the molding are then scribed, to achieve a perfect fit between them. A V-groove is then routed at the junction between the molding and the flooring, and the molding and the flooring joined together, by either chemical or heat welding of the material of
5 the flooring and molding, and the junction trimmed to achieve a seamless floor. If it is desired to retrofit the molding of the present invention into an existing resilient sheet floor, the existing sanitary corner can be cut out and the fillet strip and top can removed, and replaced with the molding of the present invention.

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**THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE
PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:**

1. A molding for installation against an inside corner, floor-wall
conjunction, said conjunction including two adjacent and generally orthogonal
5 surfaces, the molding comprising:
an elongate strip of a resilient material, and a support member
bonded to said elongate strip such that when said molding is
installed against said conjunction, said support member is
between said elongate strip and said conjunction,
10 said support member comprising a web, a flange and a curved
support section having an inner curved support surface
disposed therebetween, the curvature of said inner curved
support surface chosen such that said strip and said support
member can be bonded together without failure of said elongate
15 strip of resilient material, said support member fully supporting
said strip of resilient material in a plane transverse of said
conjunction over the extent of the support member,
said curved support section having an external curved surface,
said support member being constructed of a deformable
20 material having sufficient malleability to be deformable into
alignment with said floor-wall conjunction,
and wherein said molding is for installation against two adjacent
and generally orthogonal surfaces having an included wall angle
between them of about 90°, wherein said web and said flange
25 have an included support member angle and wherein said
included support member angle is greater than said included
wall angle, such that upon installation of said molding, said web
and said flange are deformed into alignment with the generally
orthogonal surfaces,
30 and wherein, said support member is constructed of utility grade
aluminum and said included support member angle is between
90° and 100°.

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2. A molding as claimed in claim 1, wherein said support member is elongate and extends substantially the length of said elongate strip.

5 3. A molding as claimed in claim 1, wherein said support member has a length equal to the length of said elongate strip.

4. A molding as claimed in claim 3, wherein said elongate strip comprises a first portion having a top edge and a second portion having an
10 outer edge, said first portion being bonded to said web and said second portion being bonded to said flange, said top edge being displaced from said web a sufficient distance for said top edge to be flush with the wall and said outer edge being displaced from said flange a sufficient distance for said outer edge to be flush with said floor.

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5. A molding as claimed in claim 4 wherein said first portion has a width about twice the width of said web and said second portion has a width of at least twice the width of said flange.

20 6. A molding as claimed in claim 5 wherein said web and said flange each have a width of between about 1 and 3 in.

7. A molding as claimed in claim 6 wherein said curved support surface has a radius of curvature of less than about 1 in.

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8. A molding as claimed in claim 7 wherein said radius of curvature is between about 1/4 and 1/2 in.

9. A molding as claimed in claim 1, wherein said included support
30 member angle is between 94° and 97°.

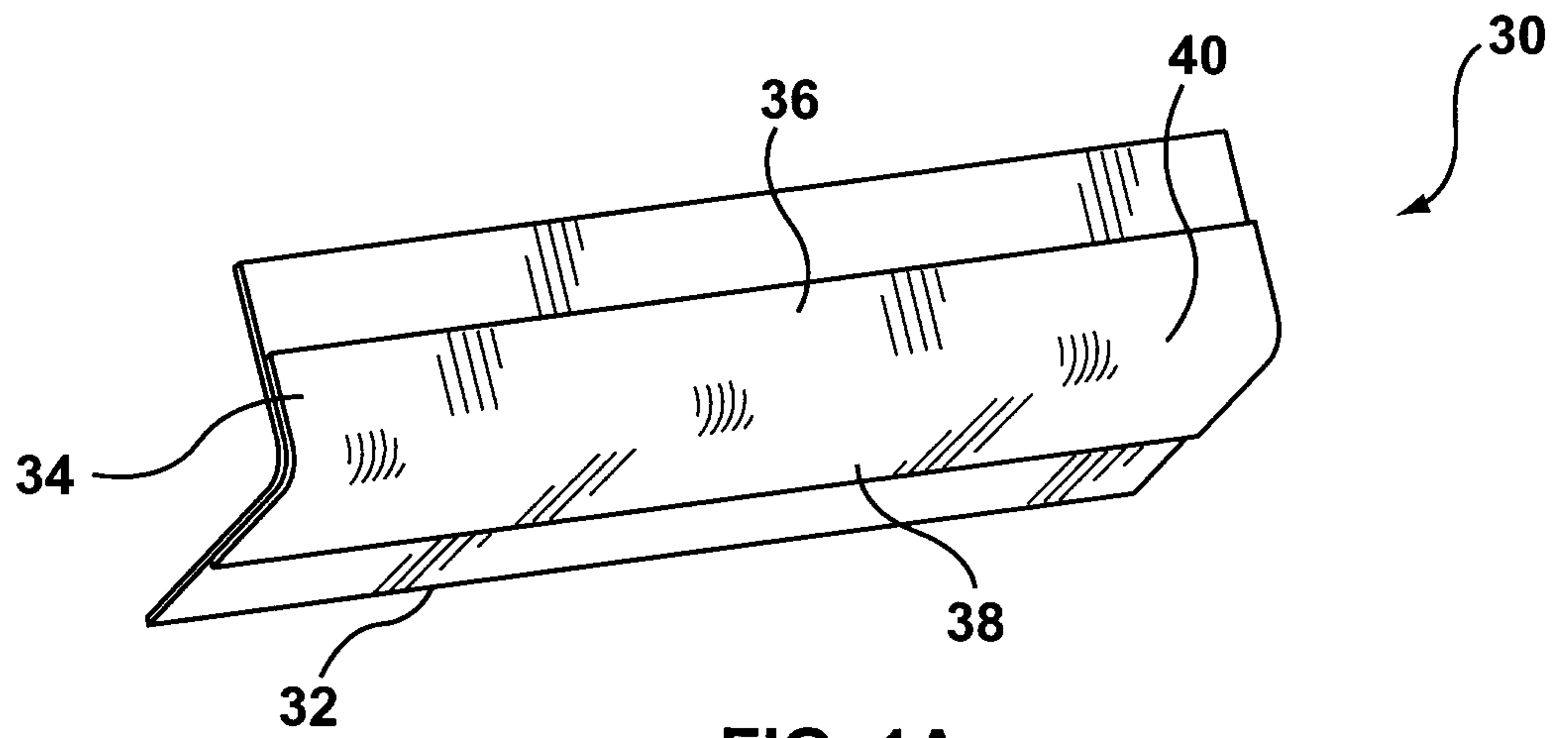


FIG. 1A

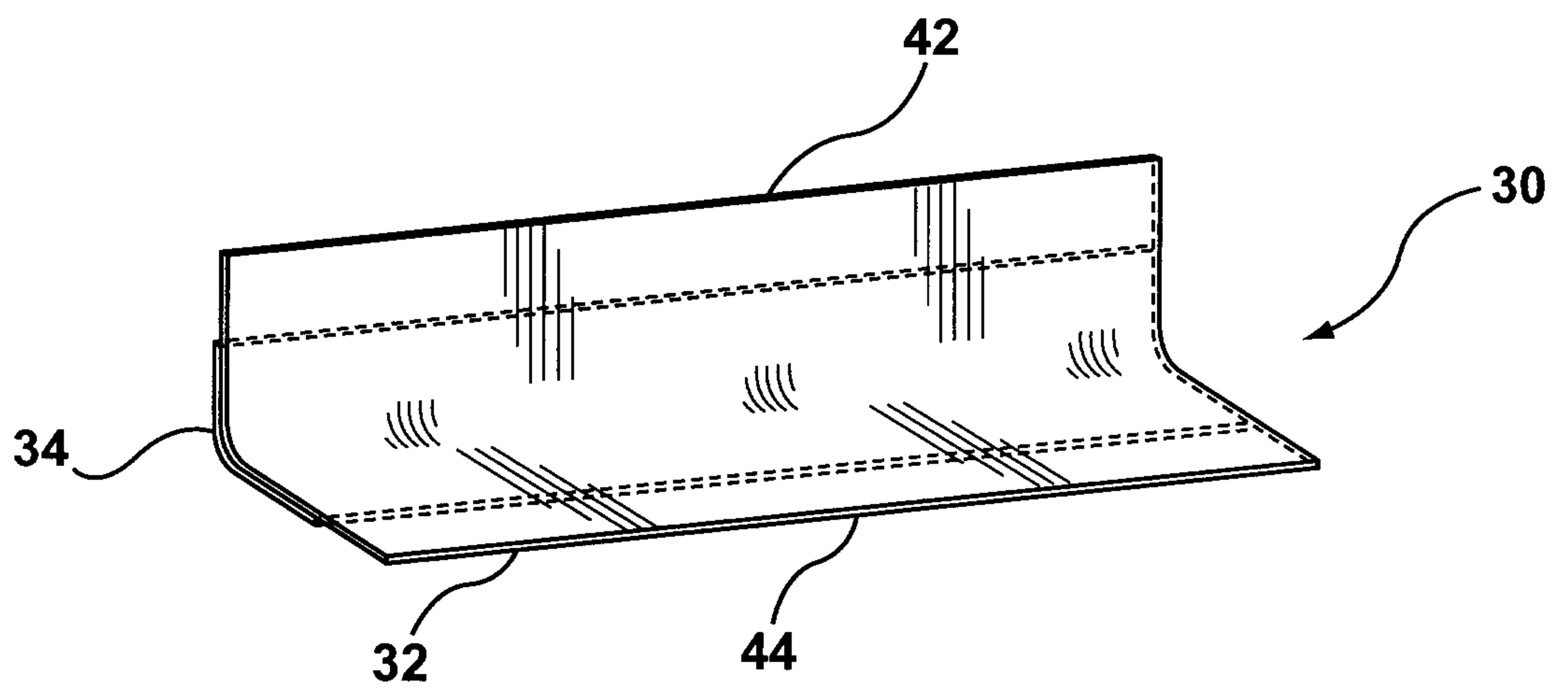


FIG. 1B

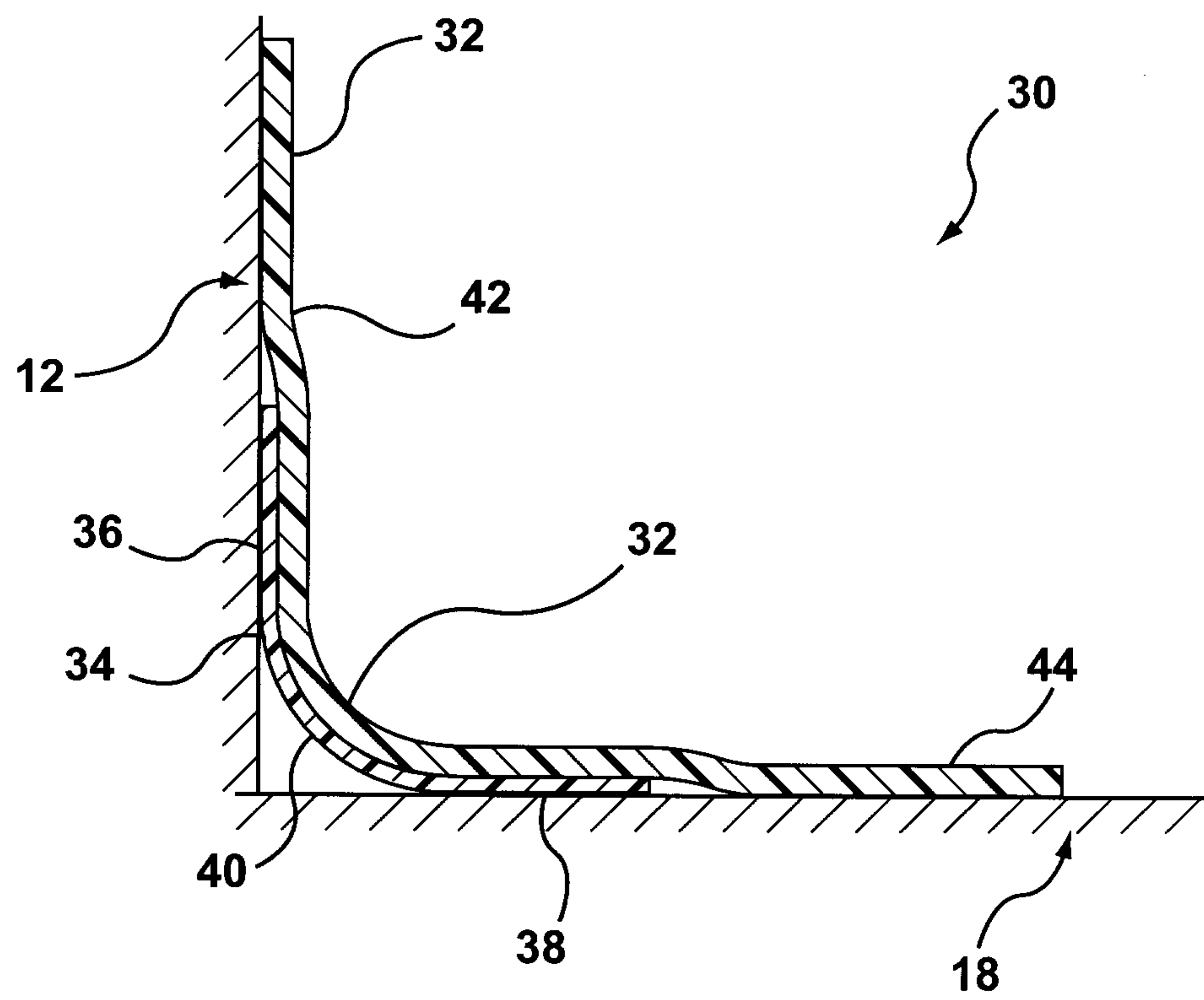


FIG. 2

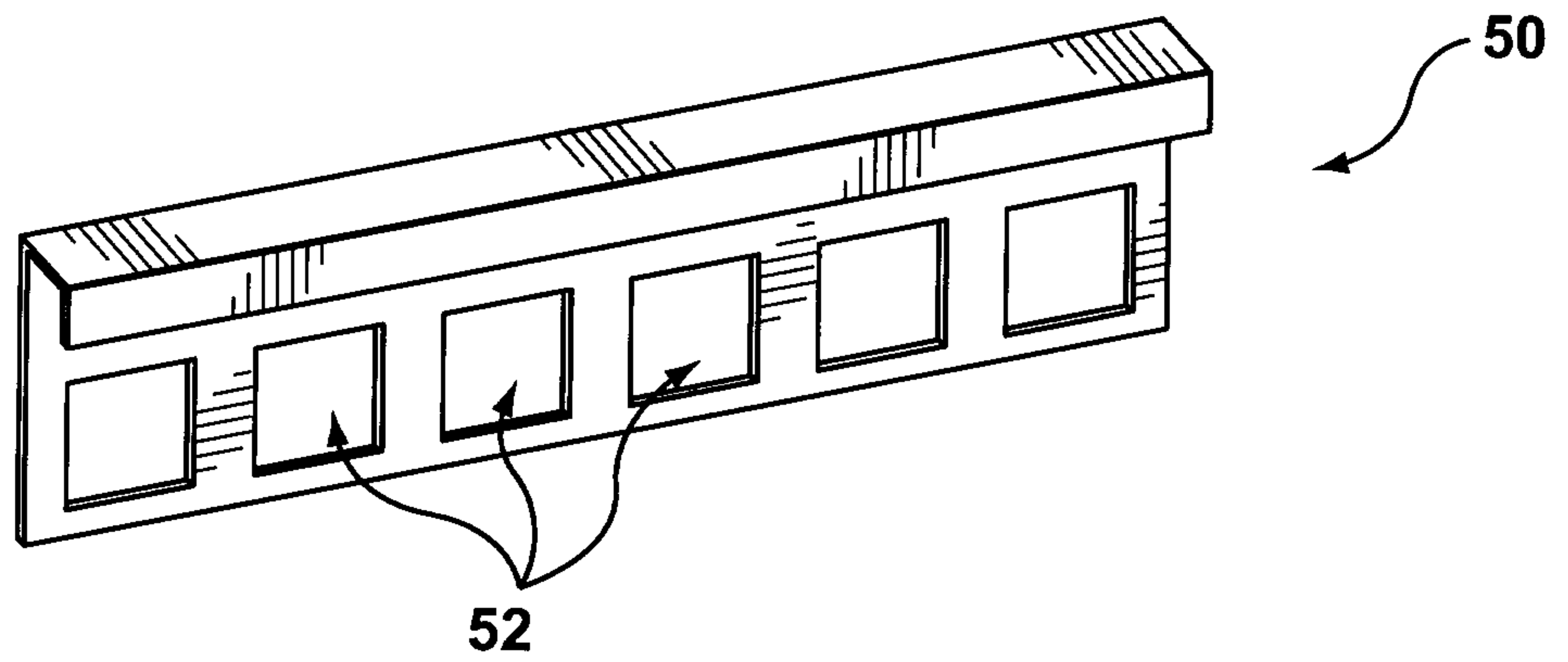


FIG. 3A

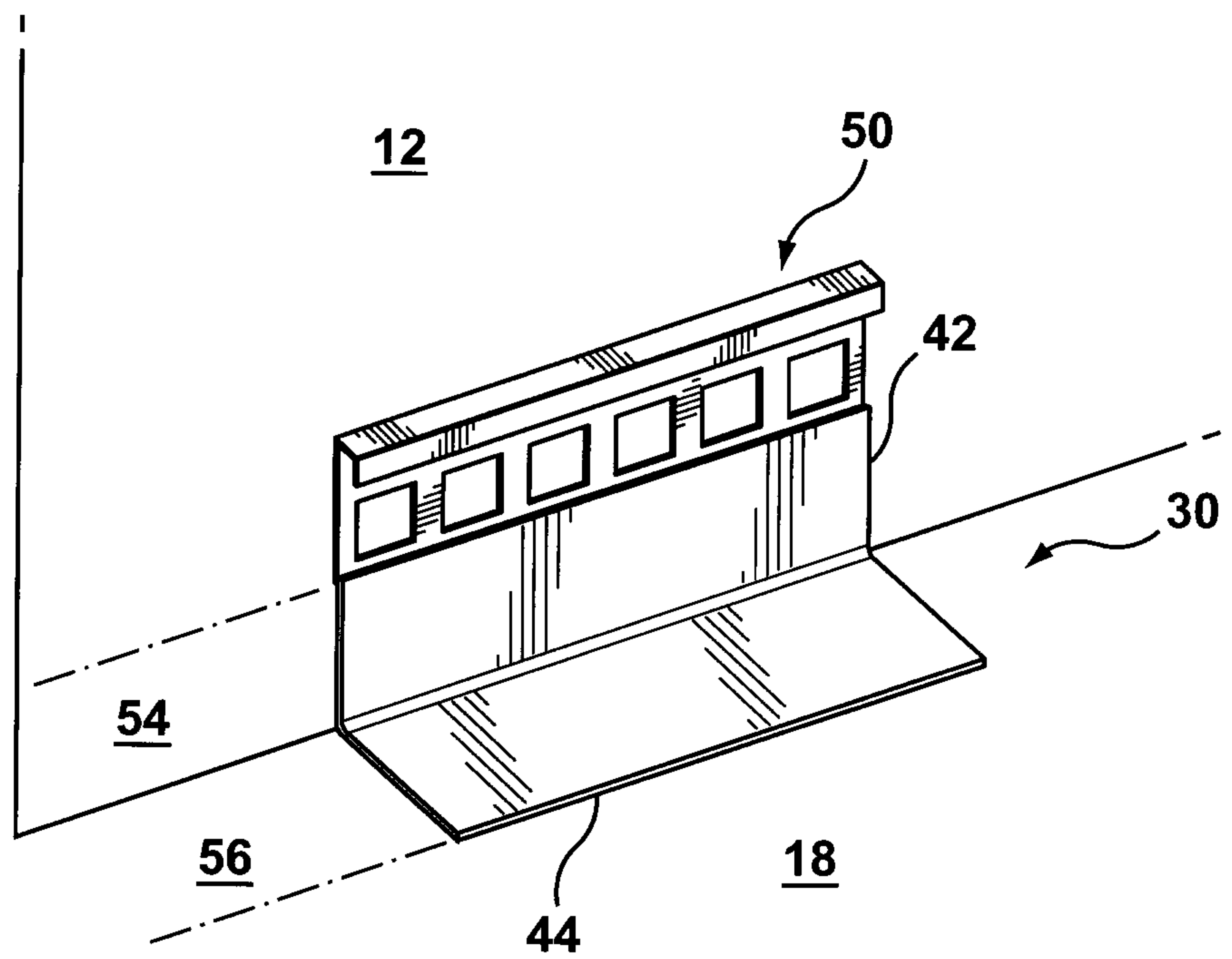


FIG. 3B

