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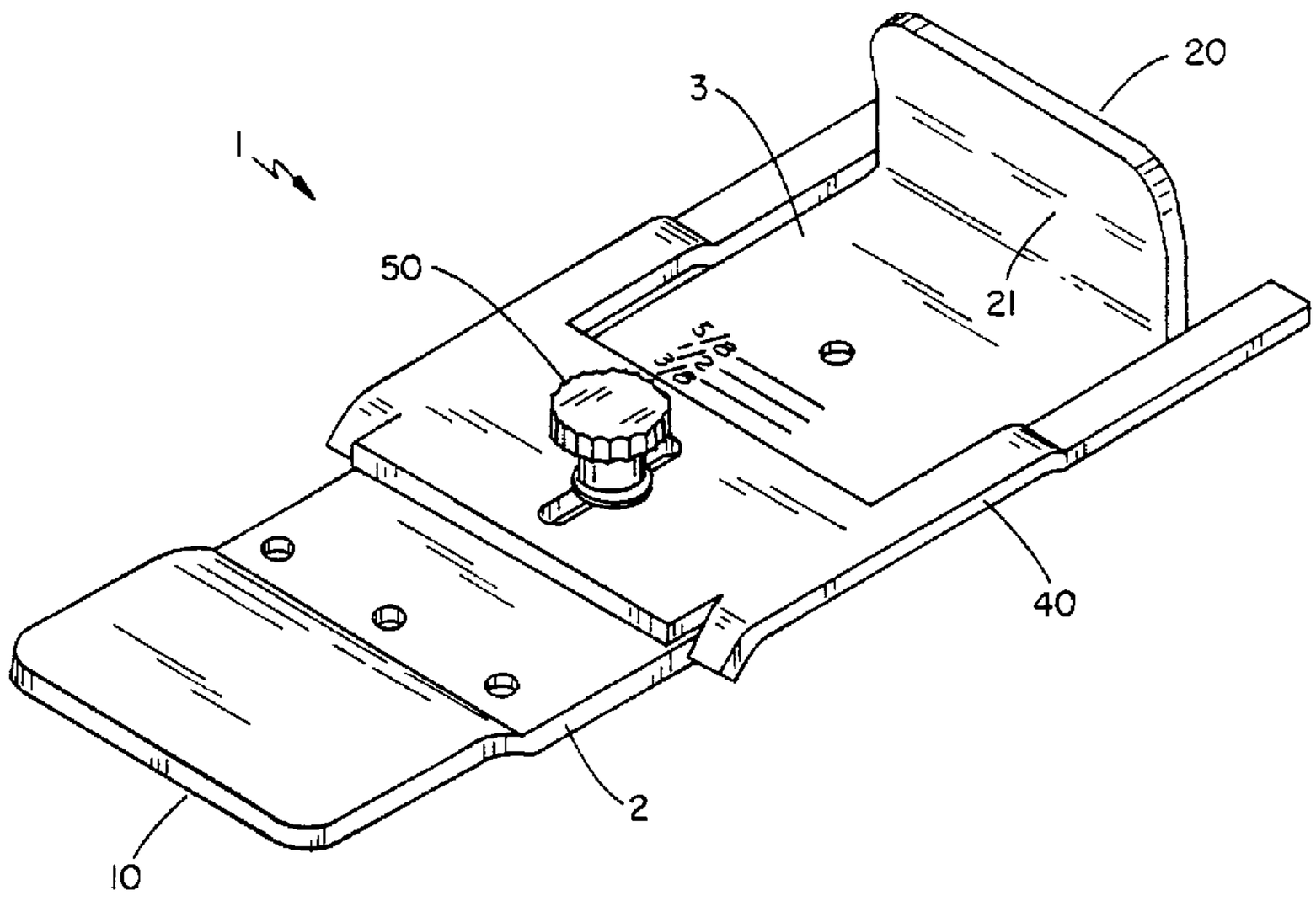
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(72) BODELL, James R., US
(71) BODELL, James R., US

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(54) **TASSEAU TEMPORAIRE AMELIORE POUR REVETEMENT EN FEUILLES**

(54) **IMPROVED TEMPORARY CLEAT FOR SHEET GOODS**



(57) An improved cleat for supporting sheet goods during alignment and fastening to underlying support structures while providing a means for lifting and shoving a bottom second sheet upward against a top first sheet and temporarily holding the second sheet in position for installation. A shaped lever plate is removably attached to a cleat. The lever plate provides a pivoting action for moving the second sheet upward.

Abstract of the Disclosure

An improved cleat for supporting sheet goods during alignment and fastening to underlying support structures while providing a means for lifting and shoving a bottom second sheet upward against a top first sheet and temporarily holding the second sheet in position for installation. A shaped lever plate is removably attached to a cleat. The lever plate provides a pivoting action for moving the second sheet upward.

Improved Temporary Cleat For Sheet Goods

BACKGROUND OF THE INVENTION

This invention relates to drywall construction, and more particularly to a cleat for temporarily holding a drywall in position while the drywall is being fastened to a supporting structure.

It is particularly useful in situations where position, size, weight, lack of sufficient manpower, or conditions of the sheet goods tend to make alignment and support awkward to have a means for temporarily holding a drywall in position. Braces, known as "dead men", and sheet goods lift systems have historically been used in these situations. These are, however, generally unwieldy, difficult to use, and often quite expensive.

In Applicant's U.S. Patent No. 5,224,309 ('309 patent) "Temporary Cleat For Sheet Goods", issued July 6, 1993, Applicant disclosed an inexpensive and easy to use cleat for supporting sheet goods during alignment and fastening to underlying support structures. The '309 patent is incorporated herein by reference. The '309 cleat is constructed of a sturdy and durable material. A pattern of holes is provided in the '309 cleat for use in fastening the cleat to strapped or non-strapped mounting surfaces. The '309 cleat has ends that are shaped to provide a means of positioning the first sheet as well as a subsequent sheets. A

removable measured spacing plate is attached to the '309 cleat so that the cleat may be positioned without the need to measure or use spacers.

When installing sheet goods, such as gypsum products, typically two sheets are applied to a wall. The longitudinal axis of each sheet is positioned horizontally. A first sheet is typically applied near to or at the top of the wall. The second sheet is then placed beneath the first sheet and shoved upward against the first sheet. Although very effective, the '309 cleat does not provide a means for lifting and shoving the second sheet upward against the first sheet.

SUMMARY OF THE INVENTION

The present invention modifies and improves the '309 cleat to provide a means for lifting and shoving a bottom second sheet upward against a top first sheet and temporarily holding the second sheet in position for installation. The modification is comprised of a shaped lever plate which is removably attached to the '309 cleat.

These together with other objects of the invention, along with various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed hereto and forming a part of this disclosure. For a better understanding of

the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated a preferred embodiment of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of sheet goods cleat constructed according to the principles of the '309 patent;

Fig. 2 is a an exploded view of the cleat of Fig. 1;

Fig. 3 is a side elevational view of the cleat of Fig. 1;

Fig. 4 is a side elevational view of the cleat of Fig. 1 vertically positioned and attached to a side wall to hold a ceiling panel;

Fig. 5 is a side elevational view of the cleat of Fig. 1 horizontally positioned and attached to a ceiling panel to hold an adjacent ceiling panel;

Fig. 6 is a perspective view of an improved sheet goods cleat constructed according to the principles of the present invention;

Fig. 7 is a perspective view of the shaped lever plate provided in Fig. 6;

Fig. 8 is an elevational side view of the lever plate of Fig. 7;

Fig. 9A is a side elevational view of the cleat of Fig. 6 positioned on a floor and in a lifting position for a side wall bottom sheet; and

Fig. 9B is a side elevational view of the cleat of Fig. 6 positioned on a floor and lifting position for a side wall bottom sheet.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings in detail wherein like elements are indicated by like numerals, there is shown in Figs. 1-5 a cleat **1** constructed according to the principles of the '309 patent. Figs. 6-9 show a cleat **1'** constructed according to the principles of the present invention.

As in the '309 patent the cleat **1'** has a main body **2** formed from a flat, elongated, generally rectangular piece of metal. The cleat body **2** has a front face **3**, rear face **4**, two long sides **5**, an offset end **10** and an angled end **20**. The two ends **10**, **20** of the cleat main body **2** differ in form and function. The cleat's longitudinal axis is defined by the offset end **10** and angled end **20**. The cleat's offset end **10** starts along the cleat's longitudinal axis with a gentle bend **11** forward from the general

plane of the front face **3** and is designed to ease a panel end **31** in, followed by a flat segment **12** parallel to the plane of the front face **3** and is intended to maintain the position of the panel end **31** after alignment, and a segment **13** bending to the cleat's front face **3** to create an offset. The offset segment **13** is required to position a sheet/panel of gypsum without a tapered edge to a sheet/panel with a tapered edge without adversely effecting the alignment of two tapered edges or two non-tapered edges. The angled end **20**, characterized in this embodiment by termination in a 90 degree forward flange **21** formed transversely to the cleat's longitudinal axis, also has a gentle curve **22** formed at its end to ease a sheet/panel onto the cleat **1'**, and once again a flat area **23** to provide a landing for the sheet/panel end **31**. The angled end **20** is used in the installation of sheet goods adjacent to a top plate.

The cleat **1'** also has an adjustable plate **40** that offers a self setting feature. The cleat's adjustable plate **40** permits the cleat **1'** to be spaced down from a ceiling structure so as to position the cleat **1'** without the need to measure or use spacers. The plate **40** is generally flat, has a generally U-shape, and lies in a plane parallel to the front face **3** of the cleat main body **2**. The plate's width is greater than that of the cleat main body **2**. The plate **40** has a base section **45** and two arms **41** extending therefrom thereby forming the U-shape. The plate **40** is positioned against the cleat main body **2** so that plate base **45** is nearest to

the cleat main body offset end **10** and the plate's arms **41** are nearest the cleat main body's angled end **20**. The plate's width exceed's the cleat main body's width by the width of the plate arms **41** which each lie just to the side **5** of the cleat main body **2**. The arms **41** extend upward from the plate base section **45** past and to either side of the cleat main body flange **21**.

The base section **45** has a central longitudinal slit **46** formed therein. A fastener assembly **50** comprised of a threaded stud **51** attached to and protruding from the main body front face **3**, two washers **52**, and a knurled thumb nut or wing nut **53** threadingly engaging the stud **51** attaches the plate **40** to the front face **3** of the cleat main body **2**. One washer **52** is placed onto the stud **51** and positioned directly against the cleat main body front face **3**. The plate **40** is then positioned against the front face **3** so that the stud **51** protrudes through the plate slit **46**. The second washer **52** is then placed onto the stud **51** and the thumb nut **53** then placed into engagement with the stud **51**. This arrangement permits longitudinal adjustment of the plate **40** relative to the cleat main body **2** by loosening of the thumb nut **53**, movement of the plate **40** to a desired position, and retightening of the nut **53**. The cleat main body front face **3** is marked with measured transverse lines **7** indicating cleat spacings such as 5/8", 1/2", 3/8", and the like. The spacing is calibrated in terms of the distance between plate arm ends **42** and the cleat main body angled

end **20**. For accuracy, the plate **40** is be kept square to the cleat main body **2**. To assist in keeping the plate square to the cleat main body **2**, an offset, transverse bend **43** is formed in each of the plate arms **41** at their approximate mid points. This causes the arms **41** to ride against the cleat main body sides **5**. The plate base section corners **47** nearest to the cleat main body offset end **10** are bent past the cleat main body sides **5**. The bent corners **47** and arm transverse bends **43** keep the plate **40** square to the cleat main body **2**.

The cleat main body **2** has four holes **8**, **9** formed through the front and rear faces **3**, **4**. The central holes **8** are used in the mounting of the cleat **1'** vertically to wall studs **60**. The cleat **1'** is used in this position to assist in the installation of sheet goods **30** adjacent to structures such as ceiling joists **61** adjacent a wall. The holes **8** are also used in the horizontal position in installations where strapping is not a part of the ceiling structure, and sheet goods are fastened directly to the joist. The side mounting holes **9** are provided in the unmodified cleat **1'** for use where strapping is an integral part of the ceiling structure. The side mounting holes **9** are also used in the modified cleat **1'** for attachment of the shaped lever plate **70** to the cleat main body **2**.

The shaped lever plate **70** has a top face **71**, a bottom face **72**, a forward end **73**, a rearward end **74**, and two sides **75**. The

lever plate **70** has a longitudinal axis defined by the forward end **73** and rearward end **74**. The lever plate longitudinal axis is coincident with the longitudinal axis of the cleat main body **2**. The lever plate forward end **73** is positioned toward the cleat main body offset end **10** and the lever plate rearward end **74** is positioned toward the cleat main body angled end **20**. The lever plate sides **75** are in general alignment with the cleat main body long sides **5**. The lever plate **70** is positioned so that its top face **71** abuts against the cleat main body rear face **4**.

The lever plate **70** is divided into two portions, a rear portion **76** and a forward portion **77** separated by a junction **78** which is perpendicular to the lever plate sides **75** and parallel to the lever plate forward end **73** and rearward end **74**. The rear portion **76** is defined by the junction **78** and rearward end **74**. The forward portion **77** is defined by the junction **78** and the forward end **73**. The forward portion **77** is generally flat and has two parallel holes **80** formed therein and extending through the top face **71** and bottom face **72**. Each hole **80** is position near to a side **75**. The holes **80** are positioned along a line parallel to the forward end **73** and correspond to the cleat main body side holes **9**. The rearward portion **76** has a radial concave curve shape **79** from top face **71** to bottom face **72**, said curve shape **79** beginning at said junction **78** and extending to the rearward end **74**.

The lever plate **70** is attached to the cleat main body by means of two threaded fasteners **81** inserted through the lever plate holes **80** from the lever plate bottom face **72** through the lever plate top face **71** and into the cleat main body side holes **9** from the rear face **4** through the front face **3**. Threaded nuts **82** are attached to the fasteners **81** thereby securing the lever plate to the cleat main body **2**.

In operation, the modified cleat **1'** may be positioned on a floor **62** adjacent to a second panel **32** to be installed beneath a first panel **33**. The first panel **33** is attached to the upper portion of a wall **63**. The second panel **32** must be positioned against the lower portion of the wall **63** and boosted upwardly a short distance to positioned it snugly against the first panel **33**. To accomplish this, the modified cleat **1'** is pushed under the second panel lower edge **34**. The offset end **10** of the cleat **1'** is pushed under the second panel lower edge **34**. The modified cleat lever plate **70** is positioned against the floor **62** and tipped forward so that the cleat offset end **10** is on the floor **62**. Pressure from a foot, or the like, is then applied vertically downward to the cleat main body angled end **20**. This causes the cleat main body **2** to rotate about the lever plate rear portion **76** on the bottom face **72** of the curved shape **79**, thereby resulting in vertically upward force on the cleat main body offset end **10**. The result of this action is to raise the second panel **32** against the first panel **33**.

It is understood that the above-described embodiment is merely illustrative of the application. Other embodiments may be readily devised by those skilled in the art which will embody the principles of the invention and fall within the spirit and scope thereof. The cleat main body **2** and lever plate **70** alone, without the plate **40** and threaded element **51**, may be used for most applications not requiring measured spacing.

I claim:

1. An improved cleat for temporarily holding sheet goods in position while the sheet goods are being fastened to a supporting structure, comprising:

a flat, elongated, generally rectangular main body, having a front face, rear face, two long sides, an offset end, an angled end, and a longitudinal axis defined by said offset end and said angled end, wherein said offset end starts along the cleat's longitudinal axis with a gentle bend forward from the general plane of the front face, followed by a flat segment parallel to the plane of the front face, and thereafter a segment bending to the cleat's front face to create an offset; and

a shaped lever plate removably attached to said main body rear face.

2. An improved cleat according to claim 1, wherein:

said shaped lever plate has a top face, a bottom face, a forward end, a rearward end, two sides, a longitudinal axis defined by said forward end and said rearward end, said lever plate longitudinal axis being coincident with the longitudinal axis of the cleat main body, said lever plate forward end being positioned toward the cleat main body offset end and said lever plate rearward end being positioned toward the cleat main body angled end, said lever plate sides being in general alignment with the cleat main body long sides, said lever plate being positioned so that its top face abuts against the cleat main body rear face.

3. An improved cleat according to claim 2, wherein:

said lever plate is divided into two portions, a rear portion and a forward portion separated by a junction which is perpendicular to the lever plate sides and parallel to the lever plate forward end and rearward end, said forward portion being defined by the junction and the forward end, said forward portion being generally flat and having two parallel holes formed therein and extending through

the top face and bottom face, each hole being position near to a side, said holes being positioned along a line parallel to the forward end and correspond to the cleat main body side holes, said rear portion being defined by the junction and rearward end, said rearward portion having a radial concave curve shape from top face to bottom face, said curve shape beginning at said junction and extending to the rearward end.

4. An improved cleat according to claim 3, wherein:

said lever plate is attached to the cleat main body by means of two threaded fasteners inserted through the lever plate holes from the lever plate bottom face through the lever plate top face and into the cleat main body side holes from the rear face through the front face, and by two threaded nuts attached to the fasteners.

5. An improved cleat according to claim 4, wherein:

said angled end terminates in a forward flange formed transversely to the cleat's longitudinal axis, said flange having a flat portion forming a ninety

degree angle with the cleat front face, said flat portion terminating in a curved end portion lying in a plane forming an angle with the plane of the cleat front face of less than ninety degrees.

6. An improved cleat according to claim 5, further comprising:

a generally flat, plate adjustably connected to said main body front face, having a general U-shape and lying in a plane parallel to said main body front face.

7. An improved cleat according to claim 6, wherein:

the plate's width is greater than that of the cleat main body.

8. An improved cleat according to claim 7, wherein:

said plate has a generally rectangular base section and two arms extending therefrom thereby forming said U-shape.

9. An improved cleat according to claim 8, wherein:

said plate is positioned against the cleat main body so that the plate base is nearest to the cleat main body offset end and the plate's arms are nearest the cleat main body's angled end.

10. An improved cleat according to claim 9, wherein:

said plate's width exceed's the cleat main body's width by the width of the plate arms which each lie just to the side of the cleat main body, said arms extending upward from the plate base section past and to either side of the cleat main body flange.

11. An improved cleat according to claim 10, wherein:

said plate base section has a central longitudinal slit formed therein.

12. An improved cleat according to claim 11, further comprising a fastener assembly for attaching the plate to the front face of the cleat main body, comprising:

a threaded stud attached to and protruding from the main body front face;

two washers positioned on said stud; and

a nut threadingly engaging the stud;

wherein one washer is placed onto the stud and positioned directly against the cleat main body front face, and said plate is then positioned against the front face and first washer so that the stud protrudes through the plate slit, and the second washer is then placed onto the stud, and the thumb nut then placed into engagement with the stud, whereby longitudinal adjustment of the plate relative to the cleat main body is made by loosening of the thumb nut, movement of the plate to a desired position, and retightening of the nut.

13. An improved cleat according to claim 12, wherein:

said cleat main body front face is marked with measured transverse lines indicating cleat spacings, wherein said spacings are calibrated in terms of the distance between plate arm ends and the cleat main body angled end.

14. An improved cleat according to claim 13, wherein:

an offset, transverse bend is formed in each of the plate arms at their approximate mid points, wherein said arms will be caused to ride against the cleat main body sides; and

the plate base section corners nearest to the cleat main body offset end are bent past the cleat main body sides.

15. An improved cleat according to claim 14, wherein:

the cleat main body has four holes formed through the front and rear faces, two of which are central holes used in the mounting of the cleat vertically to wall studs and horizontally in installations where strapping is not a part of the ceiling structure and sheet goods are fastened directly to the joist, and two of which are side mounting holes provided for use where strapping is an integral part of the ceiling structure.

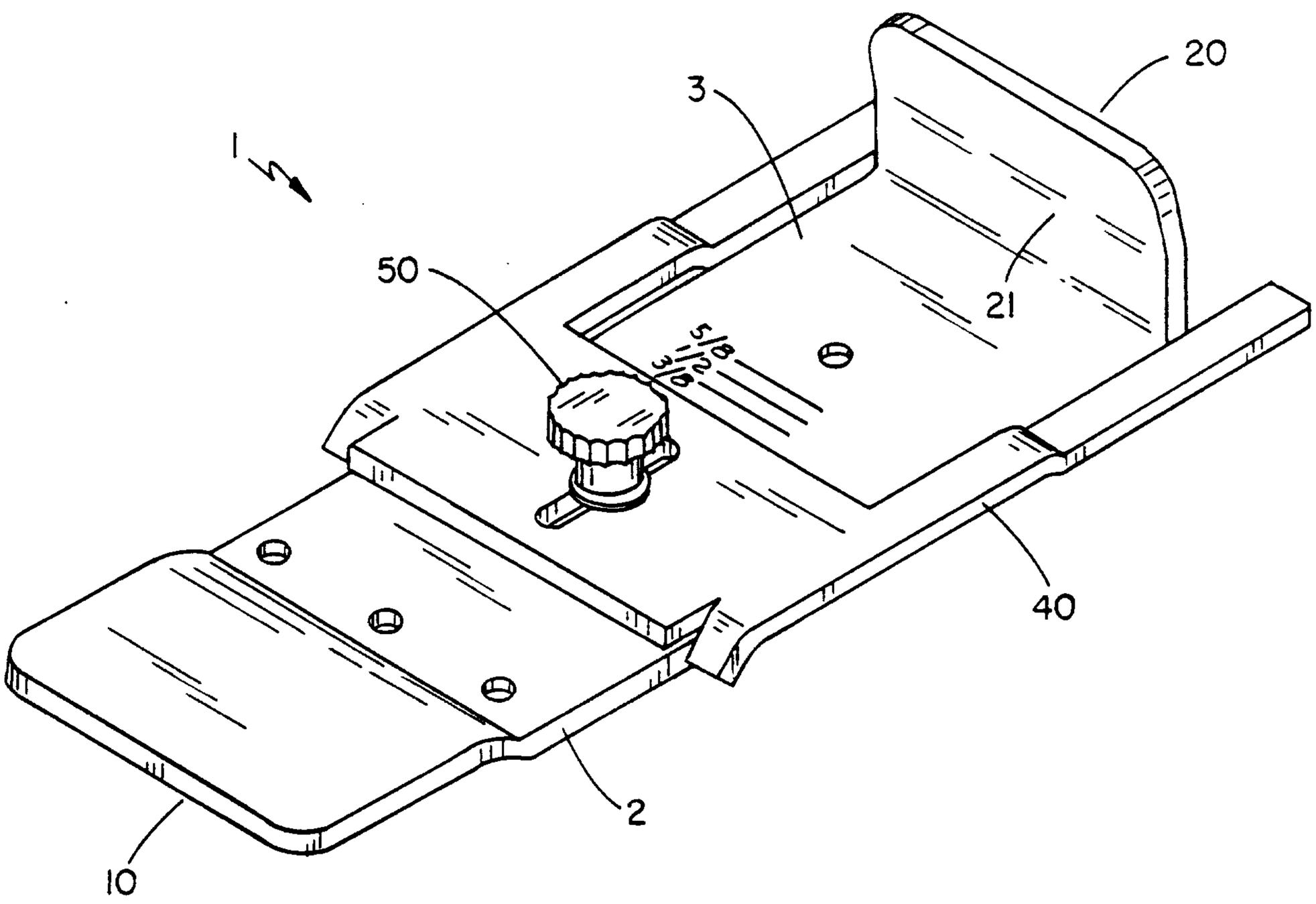


FIG. 1

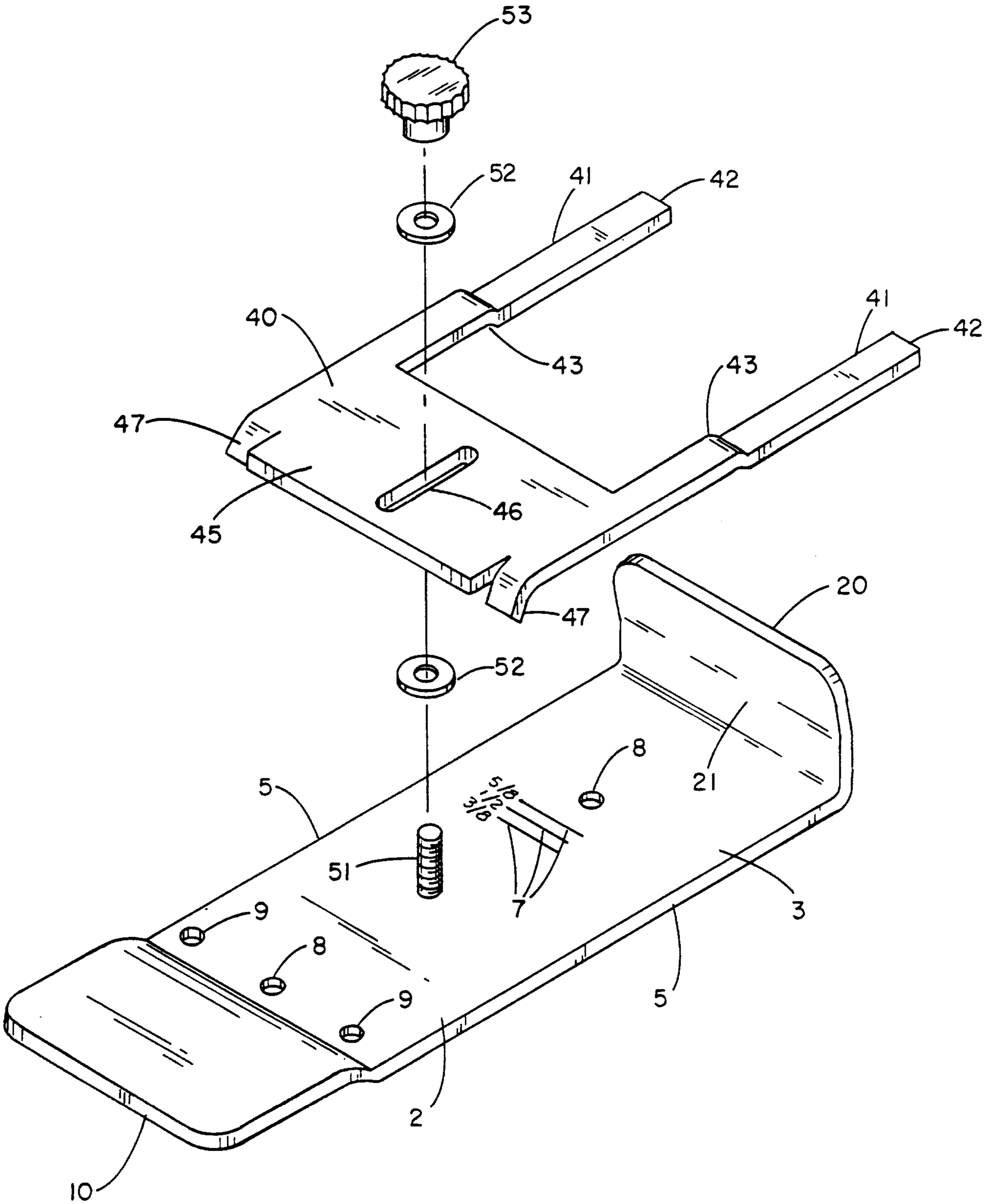

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FIG. 2

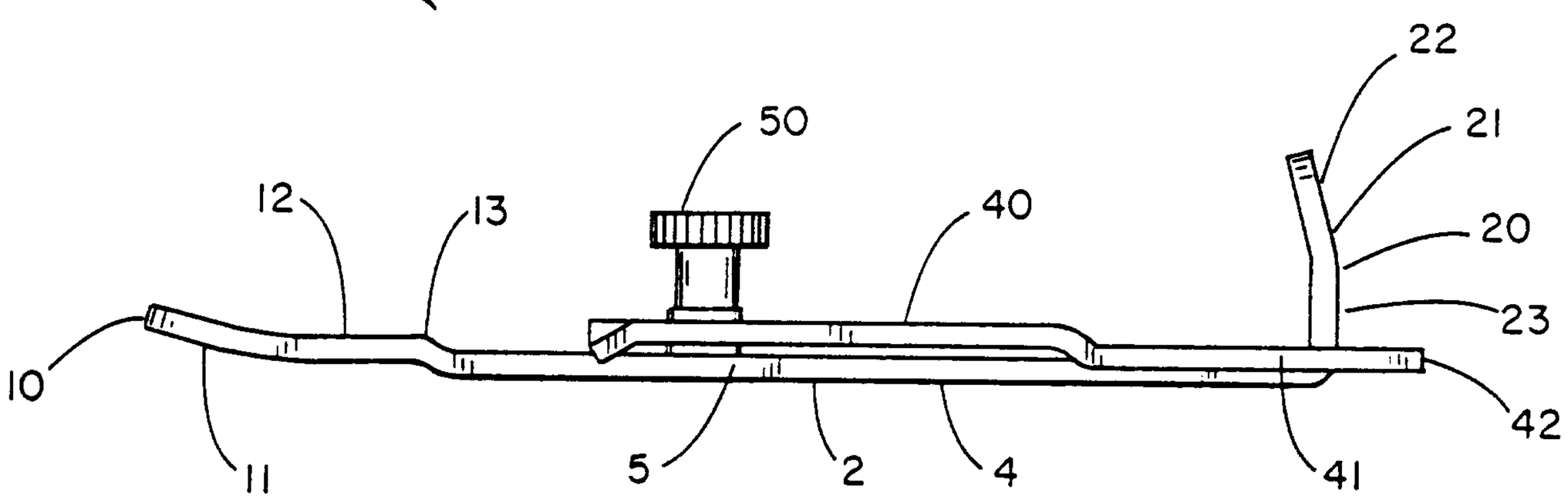

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FIG. 3

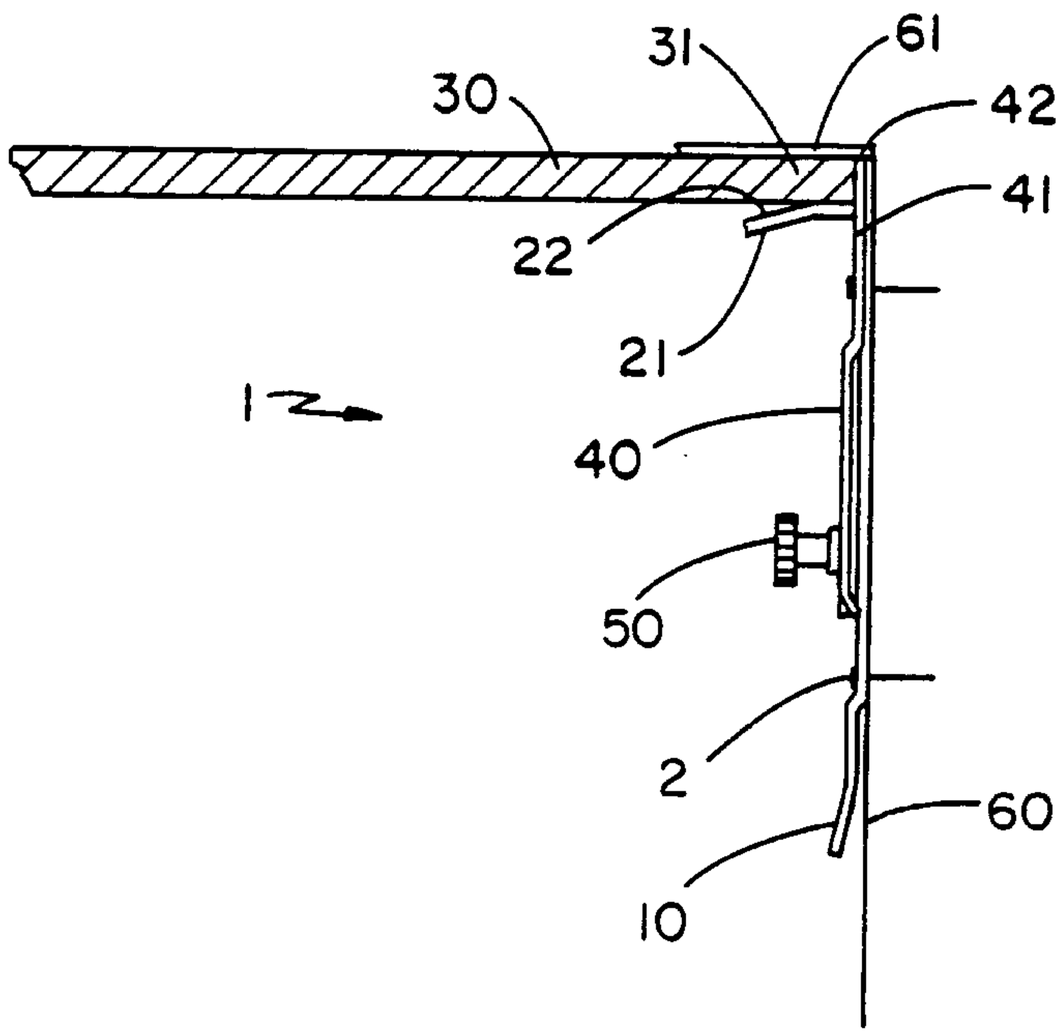

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FIG. 4

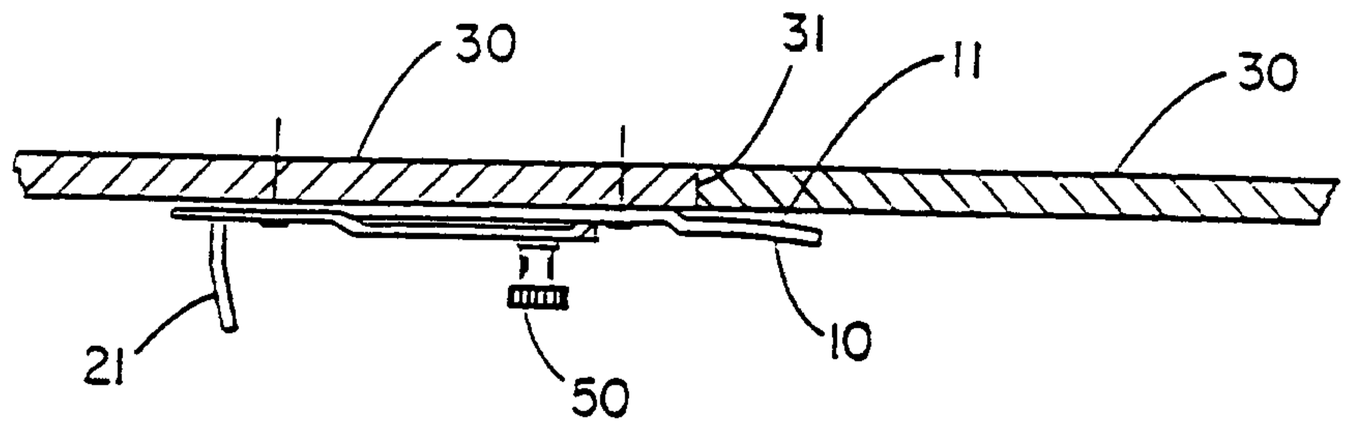


FIG. 5

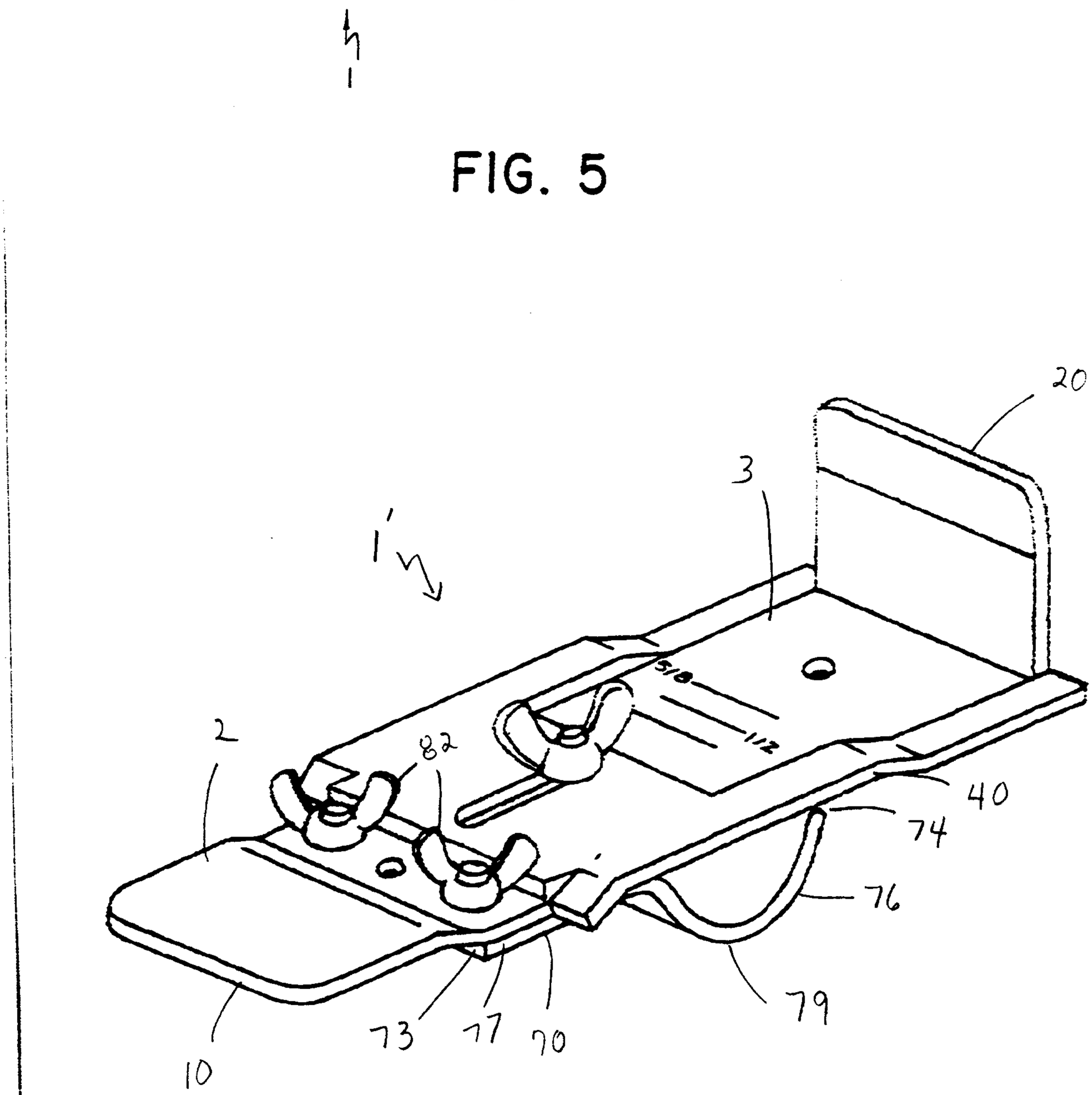


FIG. 6

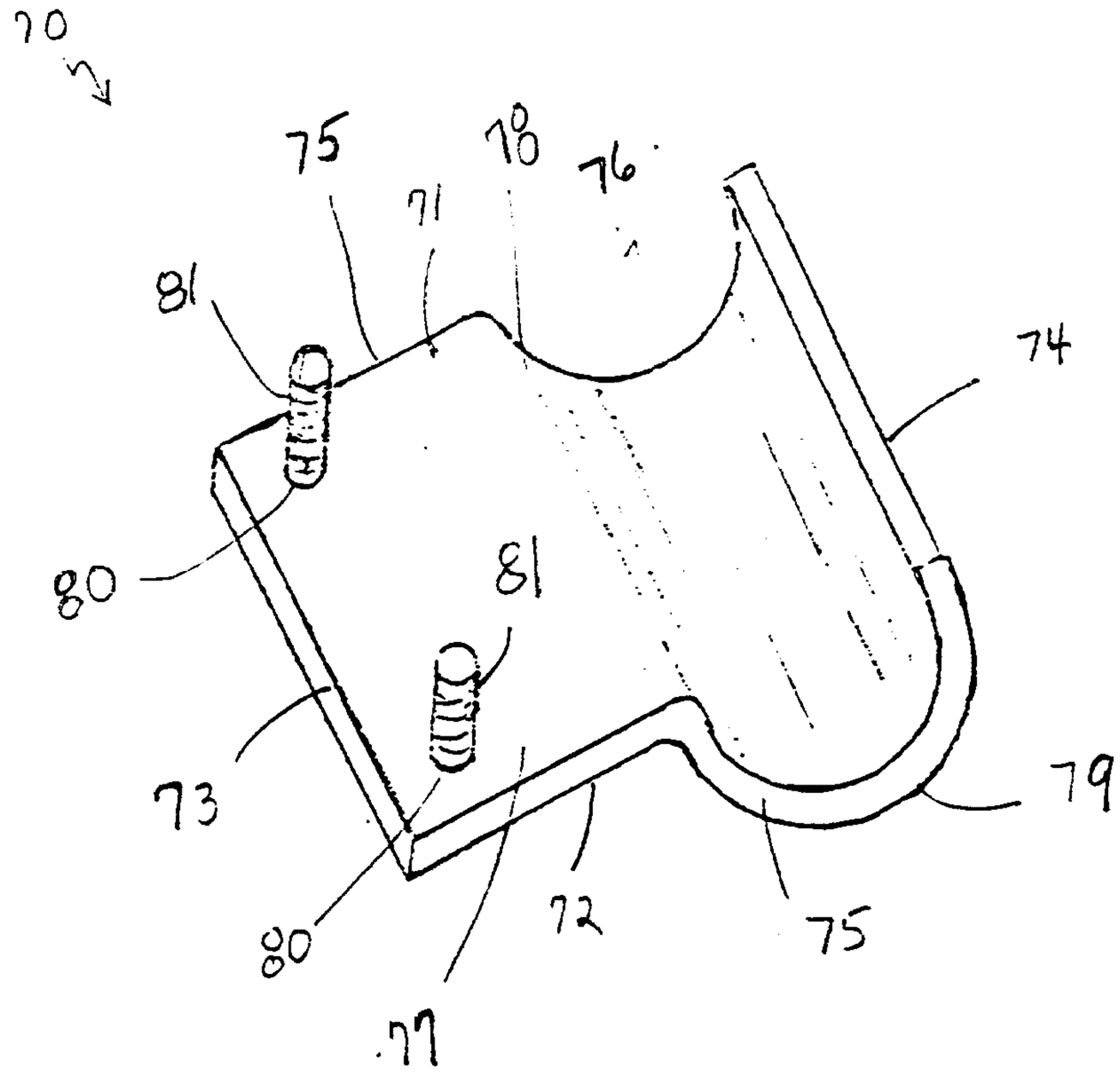

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FIG. 7

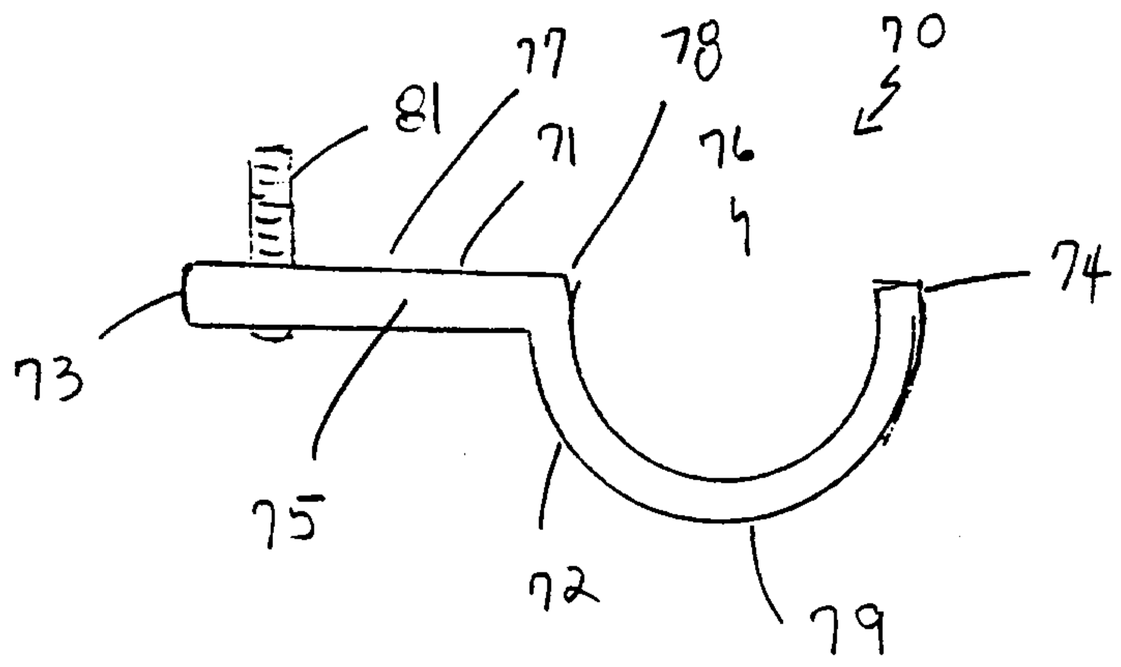

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FIG. 8

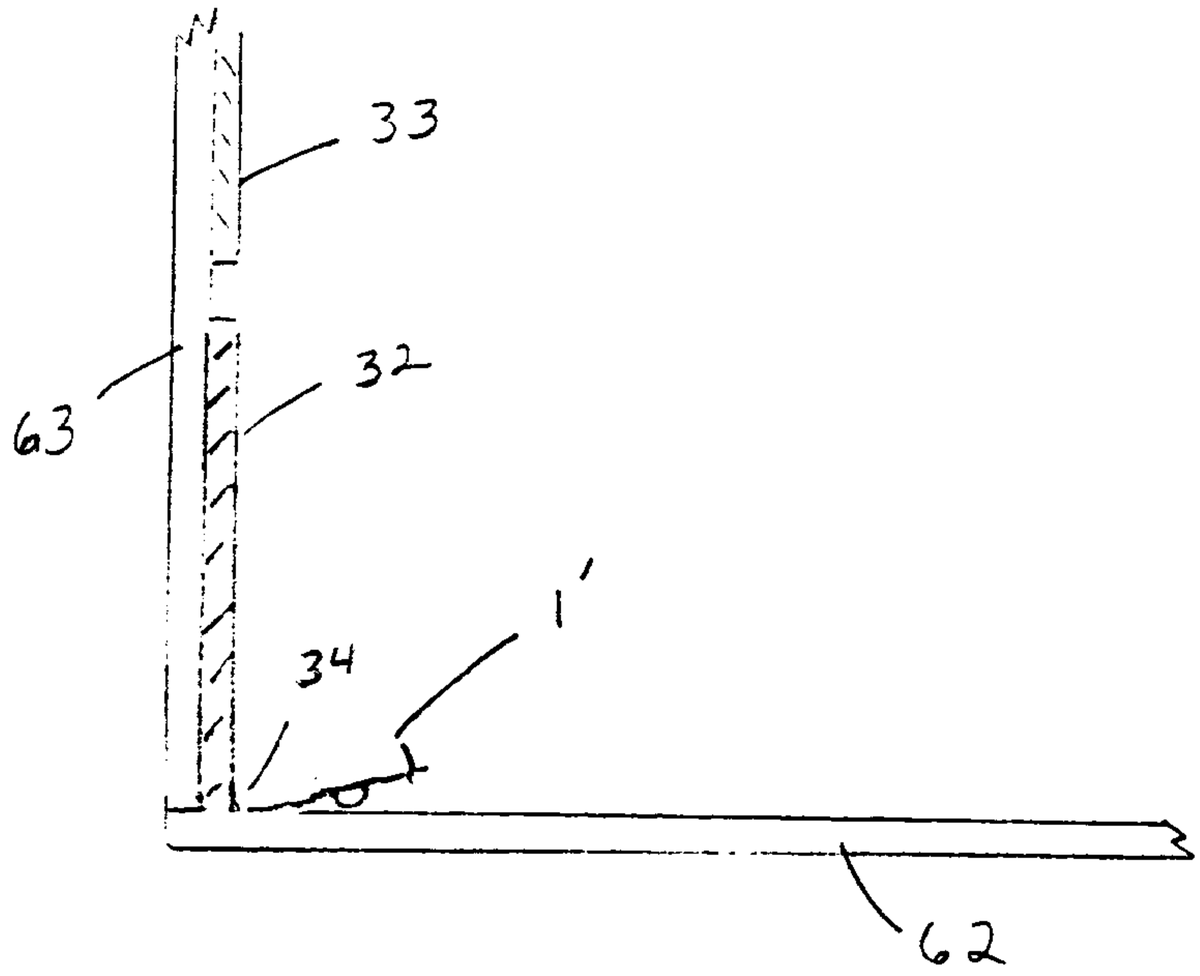


FIG. 9A

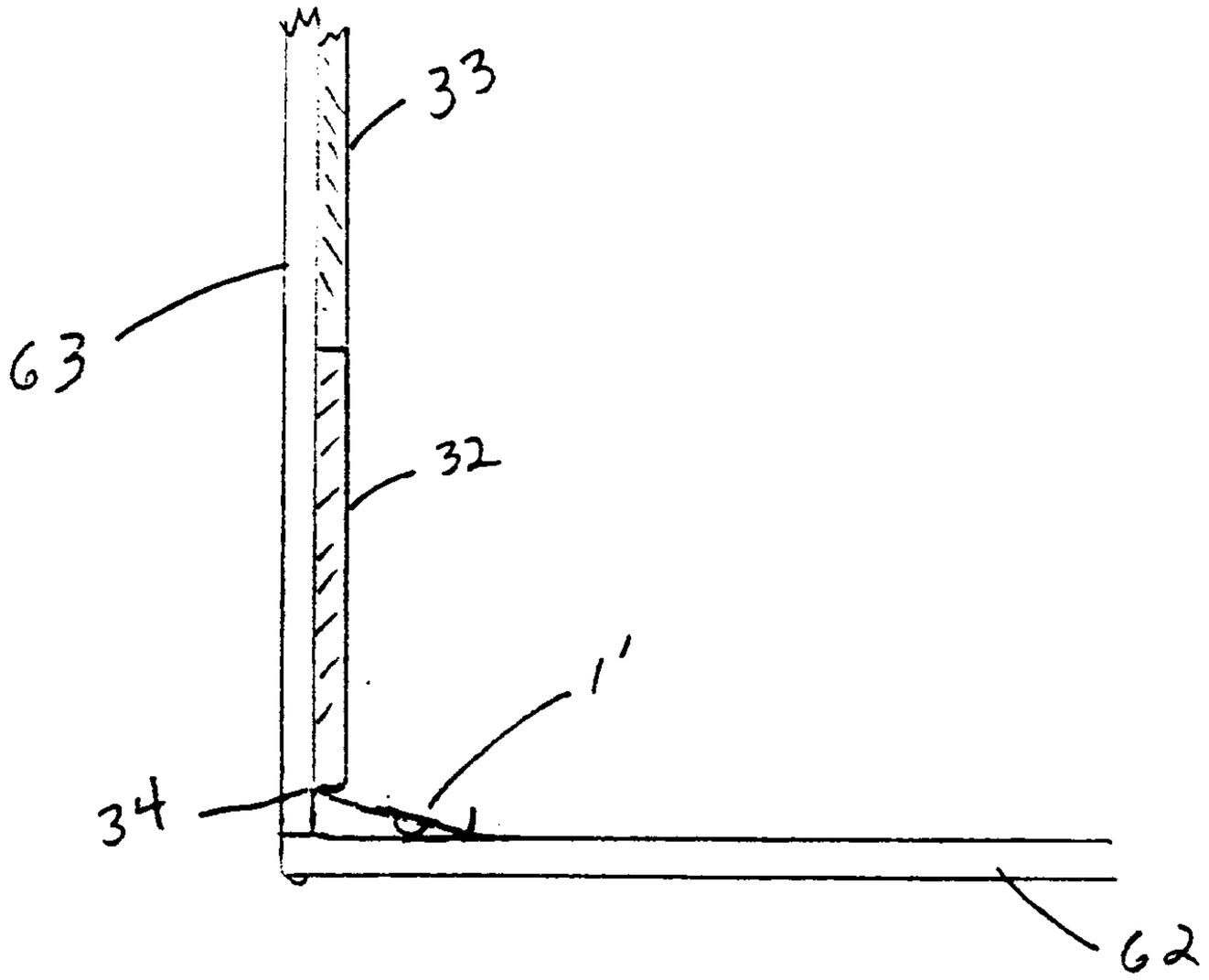


FIG. 9B