United States Patent [19]

Dole

[11] **3,769,730**

[45] **Nov. 6, 1973**

[54] **PAINTING FASTENER**

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[22] Filed: **July 15, 1971**

[21] Appl. No.: **162,764**

[52] **U.S. Cl.** **40/156**

[51] **Int. Cl.** **G09f 1/12**

[58] **Field of Search** 40/152, 152.1, 154, 40/156

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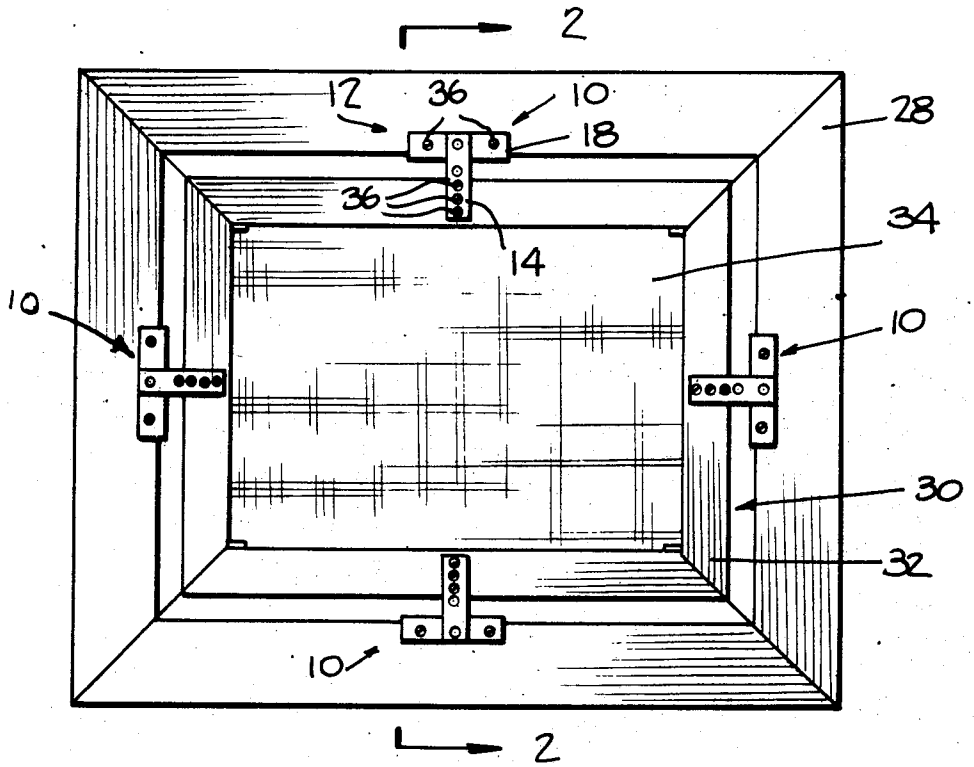
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Assistant Examiner—Wenceslao J. Contreras
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[57] **ABSTRACT**

A fastener in which a substantially flexible member is affixed to a substantially rigid member so as to protrude therefrom for securing releasably an inner member within an outer frame.

7 Claims, 6 Drawing Figures



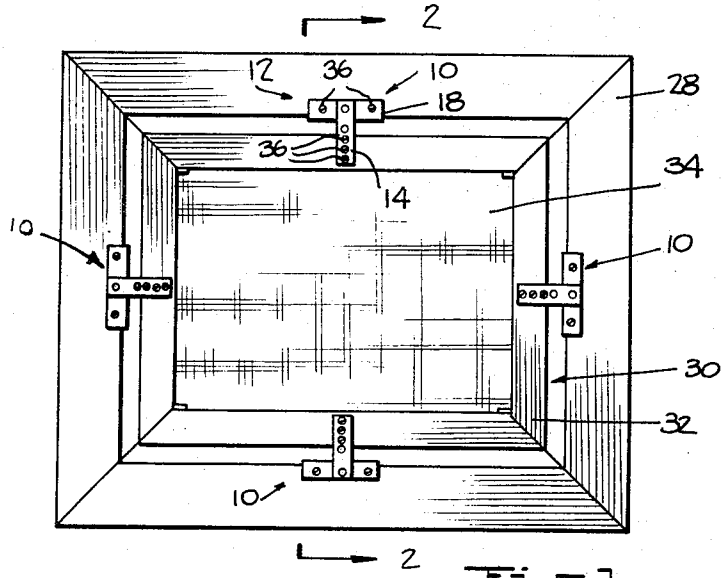


Fig. 1.

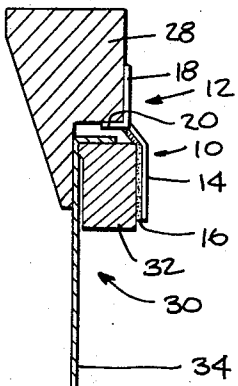


Fig. 2.

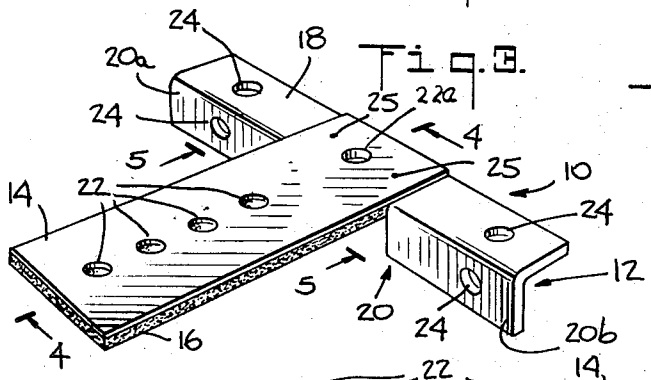


Fig. 3.

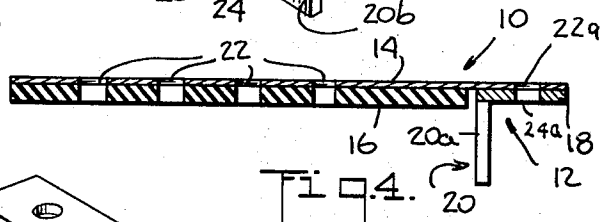
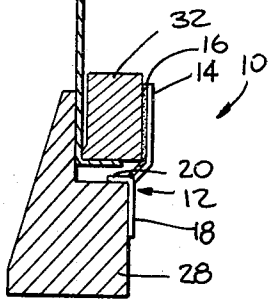


Fig. 4.



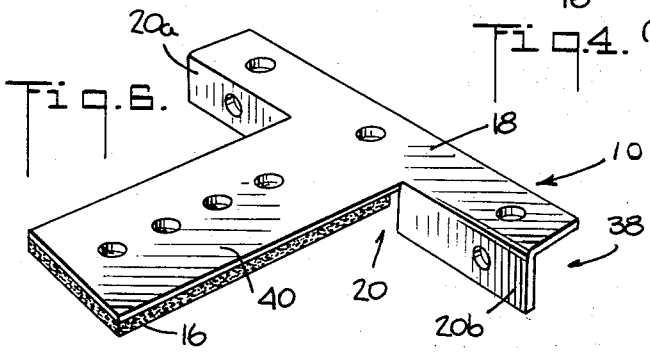
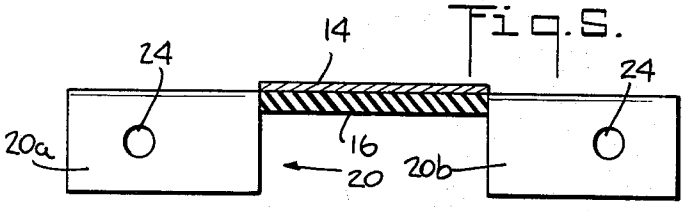


Fig. 6.

Fig. 5.



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PAINTING FASTENER

The foregoing abstract is neither intended to define the invention disclosed in the specification, nor is it intended to be limiting as to the scope in any way.

BACKGROUND OF THE INVENTION

This invention relates generally to a fastener adapted to secure releasably an inner member such as a "stretcher" having a canvas affixed thereto, within an outer frame such as a picture frame.

It is customary to display a picture by mounting it within a suitable frame which is hung from a wall. A typical picture may be executed in oil paint on a canvas fastened to a stretcher. The stretcher is usually a suitable wooden frame which is adjustable. The sides of the stretcher are secured to one another at the corners thereof by conventional dovetail joints so as to permit varying of the size of the stretcher. Initially the canvas is attached to the stretcher by suitable means, e.g., by gluing, tacking or stapling the canvas thereto. Thereafter, wedges may be inserted into the dovetail joints of the stretcher to thereby enlarge the frame so as to tighten the canvas mounted thereon for smoothing and removing any wrinkles or sags therein.

Heretofore, the stretcher has been mounted within the picture frame by means of suitable nails which are driven into the frame with a portion thereof protruding therefrom. The protruding portion of the nail is bent into engagement with the stretcher so as to secure it within the frame. Alternately, the nails may be driven completely through the stretcher and into the frame or vice versa. Other conventional means for securing the stretcher within the picture frame are right angle screw hooks, thumb screws, or spring clips. Furthermore, in order to insure that the joint between the frame and stretcher is sufficiently tight, it is frequently necessary to interpose thin wooden strips between the sides of the stretcher and the sides of the frame. However, unless the frame and stretcher are nailed together, the stretcher may still separate therefrom when subjected to the usual shocks and vibrations found generally in the shipment thereof.

It is quite common to remove the painting from the frame so as to retighten the canvas by adjusting the stretcher, or to change paintings, or frames. However, when the stretcher is nailed within the picture frame, it is difficult to remove the stretcher therefrom without its being damaged, and/or damaging the picture frame or even the painting itself. Moreover, the stretcher may not be properly aligned relative to the picture frame, inasmuch as all the nails cannot be driven evenly or simultaneously therein. In addition, the stretcher and/or picture frame, as well as the painting may be injured by the mere driving of nails into the frame.

In order to overcome many of the disadvantages associated with conventional methods utilized previously for securing a stretcher having a canvas mounted thereon within a picture frame, there is, in accordance with the present invention, provided a fastener having a flexible member which secures releasably the stretcher within the picture frame.

Accordingly, it is a primary object of the present invention to provide a fastener which is relatively easily installed so as to secure releasably an inner member within an outer frame.

Another object of the present invention is to provide a fastener which secures an inner member within an outer frame with little likelihood of causing injury thereto.

An additional object of the present invention is to provide a fastener which secures tightly an inner member within an outer frame so as to prevent separation therebetween under the typical shocks and vibrations encountered in the shipment thereof.

A further object of the present invention is to provide a fastener which is relatively economical in the installation, use and manufacture thereof.

SUMMARY OF THE INVENTION

Briefly stated, and in accordance with the present invention, there is provided a fastener member for securing releasably an inner member, such as in the nature of a canvas -stretcher, within an outer frame. Preferably, the fastener member includes a substantially flexible member affixed to a substantially rigid member so as to extend therefrom. The rigid member is mounted such that the flexible member is adapted to clamp the inner member within the outer frame. Moreover, the flexible member thereof is bendable readily so as to be adjustable for variations between the respective levels of the mounting surfaces of the corresponding outer frame and inner members, and for enabling the inner member to be removed readily from the outer frame.

In accordance with a further aspect of the present invention, the fastener member includes a resilient member secured to the flexible member. In this way, the resilient member in conjunction with the flexible member maintains the inner member within the outer frame with little likelihood of injury thereto. The fastener member is thereby adapted to secure the inner member tightly within the outer frame under the various shocks and vibrations associated with the shipment thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and advantages of the present invention will become apparent upon reading the following detailed description and upon reference to the drawings, in which:

FIG. 1 is a plan view of the preferred embodiment of the present invention, in situ, securing an inner member within an outer frame;

FIG. 2 is an enlarged elevational sectional view taken along the Line 2—2 of FIG. 1 in the direction of the arrows;

FIG. 3 is an enlarged perspective view of the preferred embodiment of the fastener member of the present invention;

FIG. 4 is an enlarged side elevational sectional view taken along the Line 4—4 of FIG. 3 in the direction of the arrows;

FIG. 5 is an enlarged front elevational sectional view taken along the line 5—5 of FIG. 3 in the direction of the arrows; and

FIG. 6 is an enlarged perspective view of another embodiment of the fastener member of the present invention.

While the present invention will be described in connection with a preferred embodiment, it will be understood that it is not intended to limit the invention to that embodiment. On the contrary, it is intended to cover all alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

DETAILED DESCRIPTION OF THE INVENTION

With continued reference to the drawings, wherein like reference numerals have been used throughout to designate like elements, a fastener member is disclosed which includes a rigid member having secured thereto a flexible member. The rigid member is preferably attached to an outer frame such that the flexible member extends therefrom over an inner member which is clamped thereby within the outer frame.

Turning first to FIG. 3, there is shown, as hereinbefore related, a perspective view of a fastener member, designated generally by the reference numeral 10. Fastener member 10 includes a rigid member, indicated generally at 12, a cantilevered flexible member 14, and a resilient member or pad 16. Rigid member 12, as shown more clearly in FIG. 4, is an L-shaped bracket having a pair of legs 18 and 20, respectively. Referring once again to FIG. 3, flexible member 14 is preferably a rectangularly shaped tongue and includes a plurality of holes 22 therein (e.g., five holes) for permitting suitable mounting means, such as conventional wood screws, to pass therethrough. Similarly, rigid member 12 includes a plurality of holes 24 therein (in this case, three holes in leg 18 and two holes in leg 20) for permitting suitable mounting means such as wood screws to pass therethrough. The flexible member 14 is attached, at one end thereof, to leg 18 of rigid member 12, by suitable means such that hole 22*a* in the former is in registry with hole 24*a* in the latter (FIG. 4). For example, flexible member 14 is preferably welded, as indicated by reference numeral 25, to leg 18 of rigid member 12 in two spots. The spot welds 25 are positioned so as to enable flexible member 14 to be bent substantially parallel to leg 20 of rigid member 12. However, flexible member 14 may be affixed to rigid member 12 by other suitable means such as by riveting or bolting. Resilient member 16 is adhered to the undersurface of flexible member 14 by means of a suitable cement and extends in an outwardly direction therealong from the region of rigid member 12 to the free end thereof. Preferably, resilient member 16 is made of an elastomer such as foam rubber. In this way, resilient member 16 may be placed in engagement with either the inner member or outer frame with substantially little chance of producing injury thereto. Moreover, such an arrangement will absorb the shocks and vibrations of shipment so as to prevent separation of the inner member from the outer member. While the resilient member 16 has been described as extending over the entire undersurface of flexible member 14, one skilled in the art will appreciate that the invention is not necessarily so limited and that resilient member 16 may extend over only a portion of the undersurface of flexible member 14, i.e., resilient member 16 is adapted to be interposed between flexible member 14 and the corresponding mounting surface.

As shown clearly in FIG. 5, Leg 20 of rigid member 12 includes a pair of leg portions 20*a* and 20*b* respectively, symmetrically positioned about a cut-out portion 26 which is approximately centrally disposed therein. The cut-out portion 26 is in substantial registry with flexible member 14. Flexible member 14 is preferably of a width equal to the width of cut-out portion 26. The removal of material from rigid member 12 in the region of flexible member 14 facilitates bending thereof. Hence, cut-out portion 26 enables flexible member 14 and resilient member 16 secured thereto to be bent sufficiently to secure an outer member to an inner member which is positioned above or beneath the level thereof, i.e., the flexible member 14 and resilient member 16 attached thereto may even be bent so that a portion thereof extends through cut-out portion 26. Thus, it is evident that the mounting surface of the inner member need not be on the same level as the mounting surface of the outer member, since flexible member 14 may be bent sufficiently to account for the difference in levels.

By way of example, flexible member 14 is made preferably of stainless steel about 0.020 inches thick, extending about 2½ inches in the lengthwise direction and about 1 inch in the widthwise direction. Resilient member 16 is preferably a strip of foam rubber preferably about 1/16th of an inch thick extending about 1 inch in the widthwise direction and about 1½ inches in the lengthwise direction. The strip of foam rubber is secured to flexible member 14 by a conventional adhesive and extends lengthwise from one end portion thereof for a distance of about 1½ inches (1 inch before the other end portion thereof), i.e., the foam rubber is adhered to the undersurface of flexible member 14 and extends from one end portion thereof to about the region of leg 20 of rigid member 12. As heretofore described, rigid member 12 is an L-shaped bracket made preferably of stainless steel. Leg 18 thereof is approximately 1/16th of an inch thick, and extends about 3 inches in the lengthwise direction, i.e., normal to the lengthwise direction of flexible member 14, and about 5/8ths of an inch in the widthwise direction. Leg 20 of rigid member 12 is also approximately 1/16th of an inch thick and includes a substantially centrally disposed cut-out portion 26. Leg portions 20*a* and 20*b* thereof are symmetrically located about cut-out portion 26, each leg portion extending about 1 inch in the lengthwise direction and about ⅜ths of an inch in the widthwise direction, cut-out portion 26 also extending about 1 inch in the lengthwise direction. Thus, flexible member 14 with resilient member 16 secured thereto is adapted to be readily bendable so as to secure an inner member to an outer member even when the mounting surfaces thereof are on different levels.

In use, a plurality of fastener members, i.e., at least a pair of fastener members disposed on opposed sides of the outer frame, secure the inner member within the outer frame. Referring now to FIG. 1, an outer frame 28 or picture frame, is illustrated therein as having an inner member, shown generally at 30, mounted therein. The inner member 30 includes a stretcher 32 having a canvas 34 mounted thereon. The stretcher 32 and canvas 34 are held within picture frame 28 by means of at least a pair of fastener members 10 (four fastener members 10 are shown in FIG. 1). Perferably, a pair of conventional wood screws 36 affix rigid member 12 to picture frame 28. Other suitable means such as cement or the like may be used to attach rigid member 12 to picture frame 28. As shown in FIG. 2, flexible member 14 is bent to account for the difference in the levels of the mounting surfaces of frame 28 and stretcher 32. Thus, resilient member 16 presses against stretcher 32 to thereby clamp stretcher 32 within picture frame 28. Flexible member 14 is preferably also affixed to stretcher 32 by means of suitable wood screws. For example, a plurality of wood screws are shown in FIG. 1 attaching flexible member 14 to stretcher 32. It will be

apparent to one skilled in the art that other suitable means, such as cement, may be used to attach flexible member **14** to stretcher **32.**

While the invention has been described in connection with the rigid member **12** being mounted on outer frame **28,** it will be apparent to one skilled in the art that the invention is not necessarily so limited and that the rigid member **12** may as well be mounted on inner member **32** with flexible member **14** mounted on outer member **28.**

Another embodiment of the present invention is shown in FIG. **6.** Turning now to FIG. **6,** a rigid member, shown generally at **38,** and a flexible member **40** are made from one piece of material, i.e, by means of a suitable stamping or die cutting operation forming a T-shaped member, with Legs **18** and **20** being the cross-bar thereof. Thereafter leg portions **20***a* and **20***b* are bent so as to form rigid member **38** into an L-shaped bracket. Whereupon, resilient member **16** may be adhered to the undersurface of flexible member **40.**

Hence, it is evident that the present invention is adapted to achieve the various aims and objectives hereinbefore set forth. Namely, the flexible member of the fastener member is readily bendable so as to secure an outer frame on one level to an inner frame on another level, i.e., the mounting surfaces are higher or lower than one another. Moreover, according to the present invention, there is little risk of damage to the outer frame or inner member merely by attaching the fastener members thereto by means of suitable wood screws. In addition, inasmuch as, the rigid member is formed from an L-shaped bracket which fits over the edge of either the outer frame or inner member, the flexible portion is substantially normal thereto. Thus, the inner member is aligned substantially automatically within the outer member. Furthermore, the fastener member may be readily detached from the inner member merely by the removal of the wood screws used to secure the flexible member thereto. In this manner, the flexible member may be bent so as to be approximately parallel to the edge of the outer frame for permitting the inner member to be easily removed therefrom. The resilient member secured to the flexible member insures that the outer frame and inner member are not damaged when the fastener member clamps them together. Moreover, the resilient member clamps the inner member tightly within the outer frame and prevents any injury thereto due to the shock and vibration associated with the shipment thereof. In addition, the fastener members are relatively inexpensive in the installation, use and manufacture thereof.

Thus, it is apparent that there has been provided, in accordance with the present invention, a fastener member that fully satisfies the objects, aims and advantages set forth hereinbefore. While the invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications, and variations will be apparent to those skilled in the art in light of the foregoing description. Accordingly, it is intended to embrace all such alternatives, modifications, and variations as fall within the spirit and broad scope of the appended claims.

Having thus described my invention what I claim and desire to protect by Letters Patent is:

1. A fastener for detachably securing a canvas-stretcher to a frame; said canvas-stretcher having a rear external peripheral edge conforming substantially both in size and configuration to a surrounding rear internal peripheral edge of said frame; said fastener comprising bracket means for embracing a portion of said internal peripheral edge of said frame, and a cantilevered flexible tongue fixedly secured to said bracket means and adapted to extend across and overlie said external peripheral edge of said canvas-stretcher; said bracket means having both a sufficiently greater lateral rigidity and lateral extent than said tongue to stabilize itself, and thereby said tongue, against bending relative to said frame in a plane parallel to one encompassing said external peripheral edge of said canvas-stretcher; said tongue being sufficiently flexible such that it is bendable, normally of said plane, from a first position overlying said canvas-stretcher to a second position extending generally parallel to, and between, said internal and external peripheral edges of said frame and canvas-stretcher, respectively; said tongue when bent into said second position permitting removal of said canvas-stretcher from said frame; said bracket means being generally L-shaped in cross-section and presenting a pair of mutually perpendicular limbs; one of said limbs being adapted to overlie a portion of said frame adjacent to said internal peripheral edge of the latter; the other of said limbs being adapted to be interpositioned between said internal and external peripheral edges of said frame and canvas-stretcher, respectively; said other of said limbs having a medially disposed cut-out which terminates at said tongue and divides the latter said limb into a pair of legs spaced from one another over a distance corresponding to the lateral extent of said tongue which is most proximate thereto.

2. A fastener as claimed in claim **1** wherein each of said limbs of said bracket means is provided with a plurality of apertures to permit stabilized anchoring thereof to said frame.

3. A fastener as claimed in claim **1** wherein said tongue and bracket means are integral with one another and derived as a unit from a thin common metal sheet; said limbs being bendable relative to one another normally of the lateral extent thereof to permit tight-fit embracing of said frame by said bracket means.

4. A fastener as claimed in claim **1** including a resilient pad secured to an undersurface of said tongue and engageable with said convas-stretcher.

5. A fastener as claimed in claim **1** wherein said tongue is provided with at least one aperture to permit anchoring thereof to said canvas-stretcher.

6. A fastener as claimed in claim **1** wherein said tongue and bracket means are metallic and welded to one another; said bracket means having a greater thickness and rigidity than said tongue.

7. In combination, a canvas-stretcher, and a frame into which said canvas-stretcher is insertable, said canvas-stretcher having a rear external peripheral edge conforming substantially both in size and configuration to a surrounding rear internal peripheral edge of said frame; the improvement comprising a fastener for detachably securing said canvas-stretcher to said frame; said fastener including bracket means for embracing a portion of said internal peripheral edge of said frame, and a cantilevered flexible tongue fixedly secured to said bracket means and adapted to extend across and overlie said external peripheral edge of said canvas-stretcher; said bracket means having both a sufficiently greater lateral rigidity and lateral extent than said tongue to stabilize itself, and thereby said tongue,

against bending relative to said frame in a plane parallel to one encompassing said external peripheral edge of said canvas-stretcher; said tongue being sufficiently flexible such that it is bendable, normally of said plane, from a first position overlying said canvas-stretcher to a second position extending generally parallel to, and between, said internal and external peripheral edges of said frame and canvas-stretcher, respectively; said tongue when bent into said second position permitting removal of said canvas-stretcher from said frame; said tongue and bracket means being integral with one another and derived as a unit from a common metal sheet; said bracket means being generally L-shaped in cross-section and defined by a pair of mutually perpendicular limbs; one of said limbs being adapted to overlie and be affixed to said frame; the other of said limbs being interpositionable between said internal and external peripheral edges of said frame and canvas-stretcher, respectively; said other of said limbs being provided with a medially disposed cut-out which terminates at said tongue and divides the latter said limb into a pair of legs spaced from one another over a distance corresponding to the lateral extent of said tongue which is most proximate thereto.

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