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TABLE LEG ATTACHMENT DEVICE

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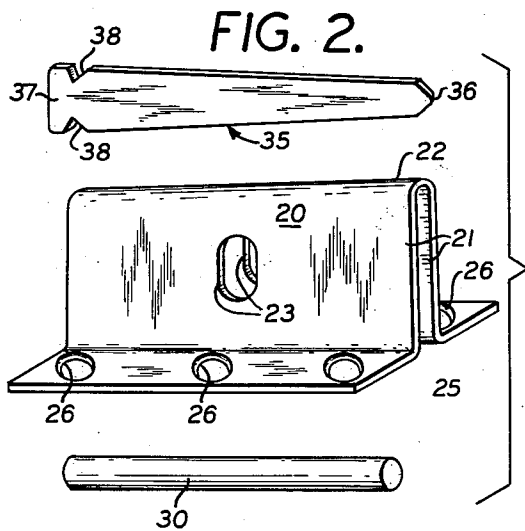
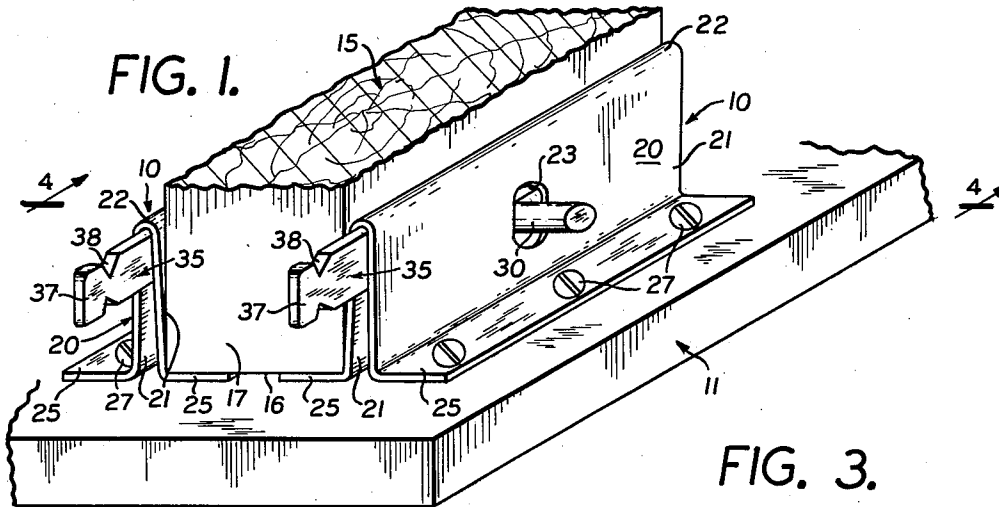


FIG. 3.

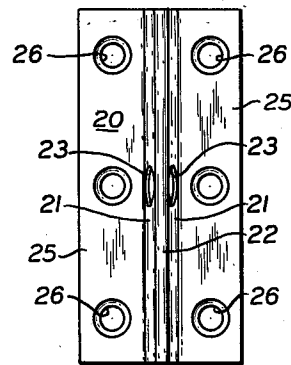


FIG. 5.

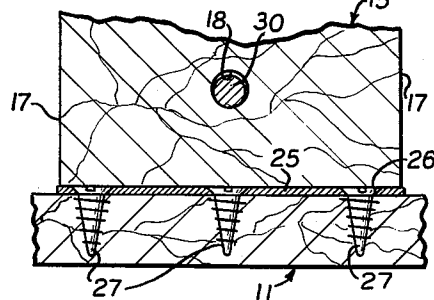
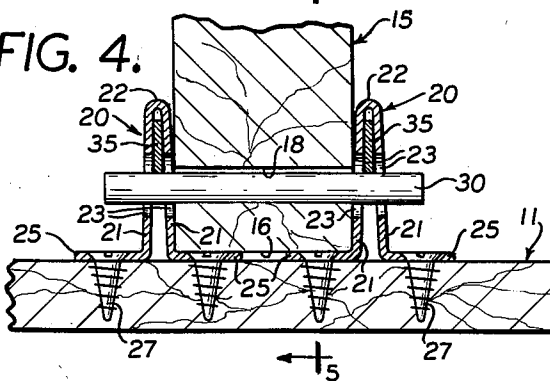


FIG. 4.



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TABLE LEG ATTACHMENT DEVICE

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7 Claims. (Cl. 287—20)

This invention relates to means for disengageably and removably attaching table legs to a table top, pedestal, or the like, and more particularly to an improved device for this purpose.

Table legs are usually attached to the table top, pedestal, or the like by means of wood screws. For shipping or moving of the table, it is necessary to disconnect the legs from the table. This relatively frequent connection and disconnection of the legs to the table by means of wood screws results in eventual loosening of the legs relative to the table, due both to enlargement of the screw-holes and to drying and shrinking of the wood.

For this reason, various arrangements have been proposed wherein the table legs are attached to the table top or pedestal by means other than screws which are intended to be removed whenever it is desired to detach the legs from the table. Among other suggested proposals, some of which are in commercial use, has been the use of a bracket which is substantially permanently attached to the table top or pedestal. This bracket is arranged to receive a suitable wedge means which cooperates with the bracket and with means on the leg to draw the end or other surface of the leg into tight engagement with the table top or pedestal. The leg is thereafter easily removed, when necessary or desirable, by knocking out the wedge.

The advantages of these arrangements are that the screws do not need to be removed each time it is desired to detach the legs from the table. However, such arrangements as hitherto used have the disadvantage that the force exerted by the wedge means, and acting against the screws intended to substantially permanently attach the bracket to the table top, eventually loosens these screws, this loosening being augmented by the aforementioned drying and shrinking of the table top or pedestal, for example. Eventually this results in a poor and relatively loose attachment of the legs to the table top or table pedestal.

In accordance with the present invention, an attachment device of this general nature is provided in which the reaction due to the driving in of the wedge means is directed against a portion of the bracket itself, and there is substantially no reaction on the screws attaching the bracket to the table top or table pedestal. More particularly, in accordance with the present invention a relatively elongated U-shape bracket is provided having at least one and preferably a pair of flanges extending normal to the free edges of its side walls. These flanges are constructed and arranged for securement to a table top, pedestal, or the like, and the flanges are formed, intermediate their ends, with aligned apertures which are elongated in a direction normal to the bight of the U-shape bracket.

The aligned apertures in the side walls of the bracket are arranged to receive a pin which is extended with clearance through an opening through a table leg which latter has a surface, such as an end or a side, engaged with one of said flanges. Wedge means are provided operating between the pin and the bight of the U to force the pin toward this one flange and thereby to firmly engage the one flange with the surface of the leg.

In this arrangement, it will be noted that the reaction due to forcing the leg surface toward the table top is absorbed by the flange of the bracket, so that all the

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forces are exerted solely between parts of the bracket, and there is substantially no force or reaction exerted on the screws holding the bracket to the table top, pedestal or the like. In actual operation, two of these arrangements are provided arranged to closely embrace a table leg end or side disposed therebetween. The legs may be readily removed simply by knocking out the two wedges and withdrawing the pin from the opening through the leg, such withdrawal being facilitated by virtue of the clearance between the pin and the hole or aperture through the leg.

For an understanding of the principles of the invention, reference is made to the following description of a typical embodiment thereof as illustrated in the accompanying drawing. In the drawing:

FIG. 1 is a perspective view, partially in section, illustrating the invention devices as used to disengageably attach a table leg to a table top;

FIG. 2 is an exploded perspective view illustrating the three parts of the device;

FIG. 3 is a plan view of the U-shape bracket;

FIG. 4 is a section taken on the line 4—4 of FIG. 1; and

FIG. 5 is a sectional view taken on the line 5—5 of FIG. 4.

Referring to FIG. 1 of the drawing, a pair of attachment devices 10 embodying the invention are illustrated as having components secured to a table top 11, in a more or less permanent fashion, for disengageably attaching a leg 15 to the table top. While devices 10 are illustrated as attaching leg 15 to a table top 11, with the end surface 16 of leg 15 adjacent the table top, it should be understood that the devices 10 may also be used to disengageably attach leg 15 to a pedestal or the like, with a side surface of leg 15 being adjacent the pedestal.

Referring to FIG. 2 of the drawing, it will be noted that each device 10 includes a generally relatively elongated and U-shape bracket 20, a preferably cylindrical and relatively elongated pin 30, and a wedge or flat tapered key 35. These parts are arranged to cooperate with each other to firmly hold a table leg engaged with a table top, pedestal, or the like.

As best seen in FIGS. 2 through 5, the bracket 20 is a relatively narrow U-shape bracket having relatively closely spaced side walls 21, 21 extending from a bight 22. While walls 21, 21 may be parallel with each other, they preferably diverge at a relatively small angle from bight 22 toward their outer ends. Each wall 21 has an aperture 23 formed therethrough substantially mid-way between its ends, the two apertures 23 of each bracket 20 being aligned and being relatively elongated in a direction normal to the bight 22. The purpose of apertures 23 will be described hereinafter. Also, each wall 21 has a flange 25 extending outwardly along its free edge substantially normal to the associated wall, the flanges 25 being preferably substantially coplanar. Flanges 25 are formed with a series of countersunk openings 26 arranged to receive wood screws 27 by means of which the flanges 25 may be secured substantially permanently to table top 11, or to a table pedestal or the like.

In using the brackets 20, the latter are secured to a table top or the like, as indicated in FIGS. 1, 4 and 5, by the use of wood screws 26 inserted through the countersunk openings 26 of the flanges 25, a pair of brackets 20 being so positioned that the surfaces of their "inner" walls 21 are spaced apart by substantially the thickness of the table leg 15. Before application of table leg 15 to the table, leg 15 has a bore 18 formed therethrough, this bore 18 having a diameter somewhat in excess of that of the pin 30 so that the pin 30 may be easily inserted through and removed from the bore 18.

Pin 30 is adapted to cooperate with the wedge 35 of FIG. 2, and with the brackets 20. Wedge 35 has a preferably pointed end 36, which is its narrower end, and a head end 37, the side edges of the wedge having notches 38 adjacent head end 37 to facilitate removal of the wedge when it is desired to detach a leg from the table.

To secure leg 15 to table top 11, for example, the end surface 16 of the leg is placed against the inner flanges 25 of the two brackets 20 and rests over these flanges. Pin 30 is then inserted through the apertures 23 of both members 20, and through the bore 18 of leg 15. Wedges 35 are then inserted into the brackets 20 outwardly of the pin 30 toward the bights 22, and are driven in with a hammer or the like to become firmly wedged between the inner surfaces of the bights 22 and the pin 30. This forces leg 15 toward table top 11 so that the end surface 16 of the leg firmly abuts and engages the inner flanges 25. It will be noted that during the driving of the wedges 35, the reaction of the leg 15 is in such a direction as to even more firmly push the flanges 25 and the screws 27 into the table top, rather than tending to draw the screws out of the table top as in known prior art constructions. To disengage leg 15 from table top 11 or the like, it is merely necessary to apply a force, as by using a screw-driver and a hammer to impact against the notches 38 of the wedge, thereby releasing the wedges from their drive fit. The pin 30 is then withdrawn, and the leg 15 may be easily removed.

The distinctive feature of the invention is that the reaction forces due to the wedging of the table leg 15 toward the table top 11 actually assist in holding the brackets 20 against the table top, with no outward strain on the screws 27. This is distinctly contrary to prior art arrangements, in which the reaction due to the wedging action tends to pull the brackets away from the table top and thus loosen the screws holding these brackets to the table top. No such action is present in the arrangement of the present invention.

While a specific embodiment of the invention has been shown and described in detail in order to illustrate the application of the principles of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A device for disengageably attaching table legs to a table top, pedestal, or the like, comprising, in combination, a relatively elongated U-shape bracket, said bracket having at least one outwardly directed flange extending from the free edge of one of its side walls and formed for substantially permanent attachment to a table top, pedestal, or the like; the side walls of said bracket having transversely aligned apertures therein intermediate their ends and elongated in a direction normal to the bight of said U-shape bracket; a relatively elongated pin extending through both apertures and adapted to extend, with clearance, through a transverse bore through a table leg having an end surface engaged with said flange and a side surface engaged with said one side wall; and wedge means engaged between said pin and said bight to force said pin away from said bight to clamp the table leg directly between said pin and said flange to firmly engage such end surface of the table leg directly with said flange.

2. A device for disengageably attaching table legs to a table top, pedestal, or the like, comprising, in combination, a relatively elongated U-shape bracket, said bracket having outwardly directed flanges extending from the free edges of its side walls and formed for substantially permanent attachment to a table top, pedestal, or the like; the side walls having transversely aligned apertures therein intermediate their ends and elongated in a direction normal to the bight of said U-shape bracket; a relatively elongated pin extending through both apertures and adapted to extend, with clearance, through a trans-

verse bore through a table leg having an end surface engaged with one of said flanges and a side surface engaged with the side wall from which said one flange extends; and wedge means engageable between said pin and said bight to force said pin away from said bight to clamp the table leg directly between said pin and said flange to firmly engage such end surface of the table leg directly with said one flange.

3. A device for disengageably attaching table legs to a table top, pedestal, or the like, comprising, in combination, a relatively elongated U-shape bracket having relatively closely spaced side walls extending from a bight, said bracket having outwardly directed substantially coplanar flanges extending from the free edges of its side walls and formed for substantially permanent attachment to a table top, pedestal, or the like; said side walls having transversely aligned apertures therein intermediate their ends and elongated in a direction normal to said bight; a relatively elongated pin extending through both apertures and adapted to extend, with clearance, through a transverse bore through a table leg having an end surface engaged with one of said flanges and a side surface engaged with the side wall from which said one flange extends; and wedge means engageable between said pin and said bight to clamp the table leg directly between said pin and said one flange to force said pin away from said bight to firmly engage such end surface of the table leg directly with said one flange.

4. A device for disengageably attaching table legs to a table top, pedestal, or the like, as claimed in claim 3 in which said wedge means comprises a substantially flat tapered key insertable between said side walls and engageable with said bight and said pin.

5. A device as claimed in claim 4 in which said pin is substantially circular in cross section and said apertures are substantially oval.

6. A device for disengageably attaching table legs to a table top, pedestal, or the like, comprising, in combination, a pair of relatively elongated U-shaped brackets, each bracket having at least one outwardly directed flange extending from the free edge of one of its side walls and formed for substantially permanent attachment to a table top, pedestal, or the like; the side walls of said brackets having transversely aligned apertures therein intermediate their ends and elongated in a direction normal to the bight of the U-shaped bracket; said brackets being secured to the table top, pedestal, or the like with their side walls in substantially parallel relation and the respective inner side walls of the two brackets being spaced apart by substantially the thickness of the leg to be attached; a relatively elongated pin extending through both apertures in both brackets and adapted to extend, with clearance, through a transverse bore through a table leg having an end surface engaged with a flange of each bracket and a side surface engaged with the inner side wall of each bracket; and wedge means engaged between said pin and each bight to force said pin away from said bight to clamp the table leg directly between said pin and said flanges to firmly engage such end surface of the table leg directly with said flanges.

7. A device as claimed in claim 5 in which said key has a pointed relatively narrow end and a head at its relatively wider end; the side edges of said key being notched inwardly of said head to facilitate disengagement of said wedge.

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