

March 25, 1958

J. SHAPIRO
PIECE OF HARDWARE FOR ATTACHING A LEG TO
FURNITURE AND THE LIKE

2,828,174

Filed Nov. 19, 1956

3 Sheets-Sheet 1

Fig. 1

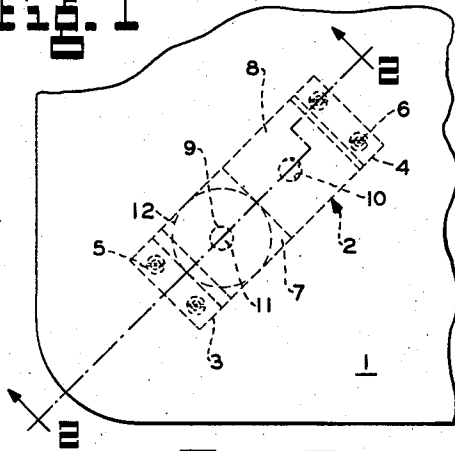


Fig. 2

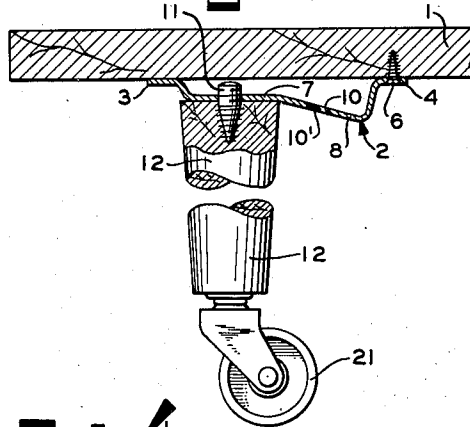


Fig. 3

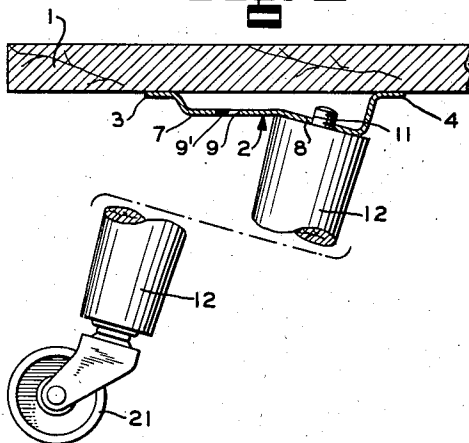


Fig. 4

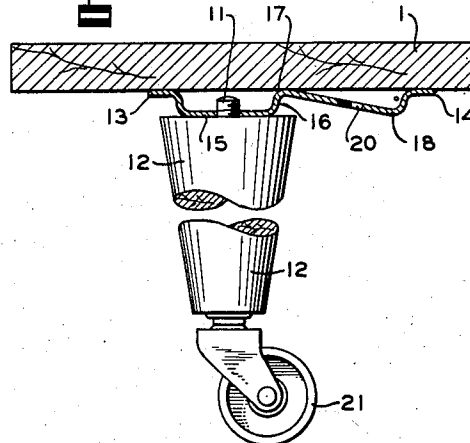
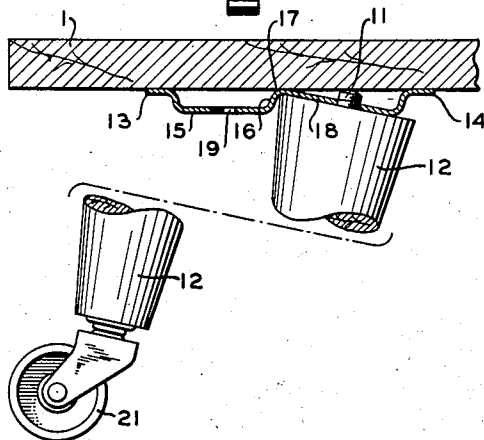


Fig. 5



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Fig. 6

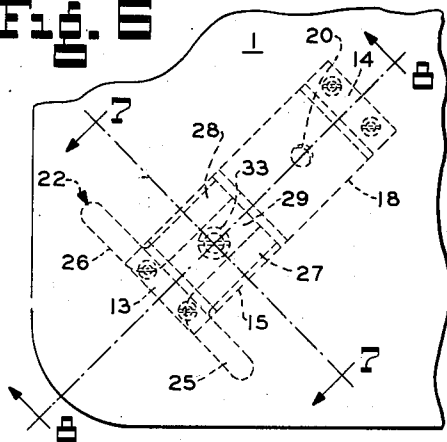


Fig. 7

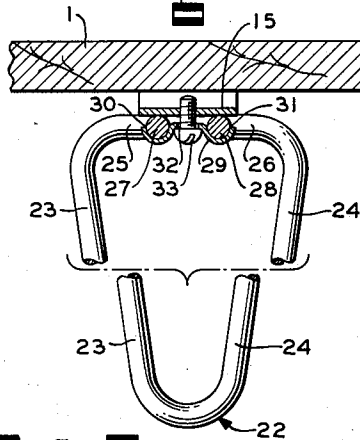


Fig. 8

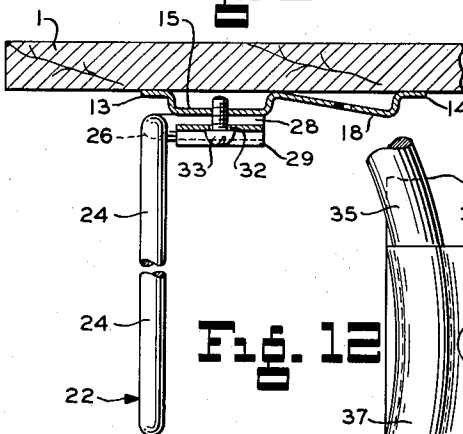


Fig. 9

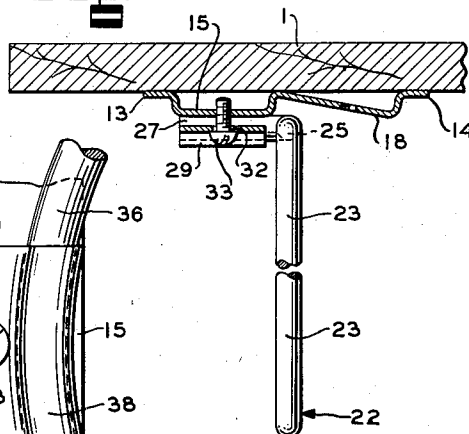


Fig. 12

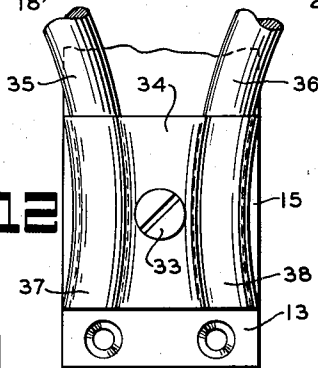


Fig. 10

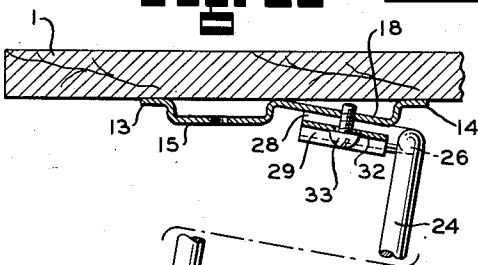
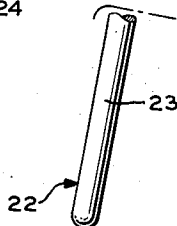
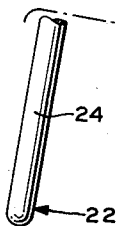
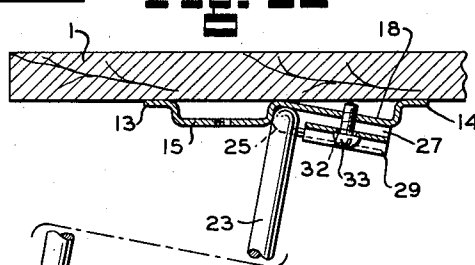


Fig. 11



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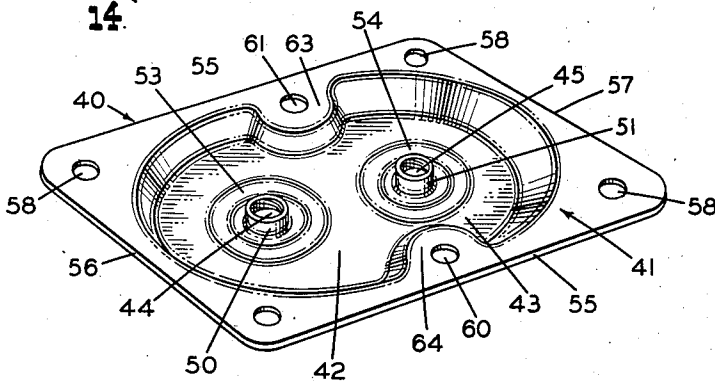
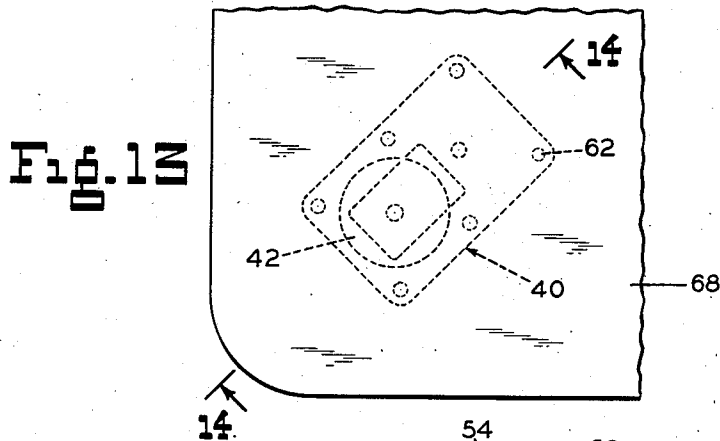
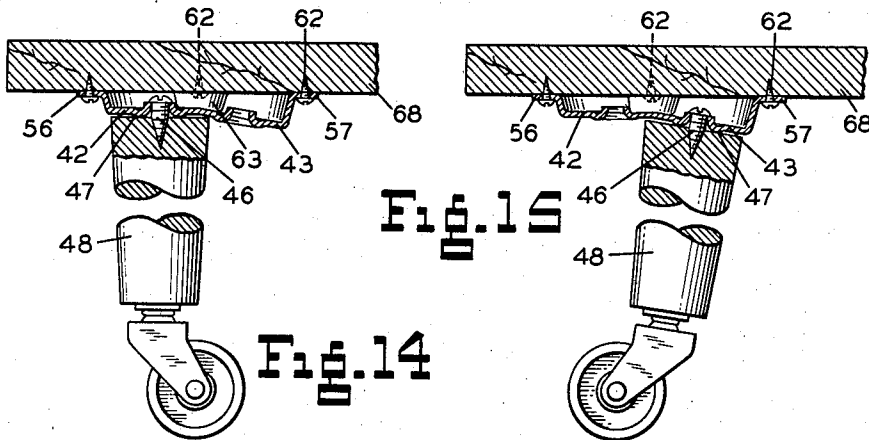
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3 Sheets-Sheet 3



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PIECE OF HARDWARE FOR ATTACHING A LEG TO FURNITURE AND THE LIKE

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Application November 19, 1956, Serial No. 623,085

4 Claims. (Cl. 311-104)

This invention relates to apparatus for supporting table tops and other articles of furniture and, more particularly to articles of hardware for attaching legs to furniture units. This application is a continuation-in-part of my co-pending application, Serial No. 518,300, filed June 27, 1955, for leg affixing and means.

Accordingly, an object of this invention is to provide an article of hardware of generally plate-like form that can be readily affixed to furniture which is adapted to receive and secure legs for the furniture in a selective, vertical and inclined position, such article being of simple construction and efficient for the intended purpose.

Another object of this invention, is to provide an article of hardware for securing legs to furniture in a selective, vertical and inclined relationship and which will be used to secure legs of different lengths thereto for adjusting the height of the article of furniture.

All of the foregoing, as well as additional objects and advantages of this invention will become apparent from a study of the following specification taken in connection with the accompanying drawing, wherein:

Figure 1 is a top plan view of a corner of a table top illustrating one form of an attaching plate made in accordance with the present invention, in position on the underface of the table top, showing a leg secured thereto in a vertical position;

Figure 2 is a cross-sectional view taken along line 2-2 of Figure 1;

Figure 3 is a view similar to Figure 2 showing the leg attached to the table in an inclined position;

Figure 4 is a view similar to Figure 2 showing a modified form of the present invention in which the attached plate has a transverse bend intermediate each end that provides a downwardly extending channel and a transverse upwardly directed weight supporting ridge;

Figure 5 is a view similar to Figure 4 showing the leg in an inclined position;

Figure 6 is a plan view of the corner of a table top having a wrought iron or metal wrought leg secured thereto by means of the bracket shown in Figures 4 and 5;

Figure 7 is a cross-sectional view taken along line 7-7 of Figure 6;

Figure 8 is a cross-sectional view taken along line 8-8 of Figure 6;

Figure 9 is a view similar to Figure 8 showing the leg secured to the bracket in a different position.

Figure 10 is a view similar to Figure 8, showing the leg secured to the bracket in an inclined position;

Figure 11 is a view similar to Figure 10, showing the leg secured to the bracket in a different position;

Figure 12 is a fragmentary bottom plan view illustrating the use of arcuate fastening arms formed on the upper ends of the wrought iron leg;

Figure 13 is a view similar to Figure 1 showing a still further modified form of the attachment device;

Figure 14 is a cross-sectional view taken along line 14-14 of Figure 13;

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Figure 15 is a view similar to Figure 14, showing the leg secured to the device in an inclined position; and

Figure 16 is a perspective view of the device shown in Figures 13 to 15.

Referring to Fig. 1 and the associated views, a table top is designated by the numeral 1. Attached underneath a corner portion of 1 is a plate, as of metal and of requisite rigidity, in the form of a rectangular strip 2 which is bent at its ends to provide flanges 3 and 4. The flanges may be perforated as at 5 to allow for passage of screws 6 to fasten the strip to the table top. The plate has a channel portion 7 providing a segment having a surface which is disposed in a parallel plane with the table top bearing surfaces of the two flanges. Segment 7, therefore, is horizontally disposed when attached to the flat horizontal table. The plate is further bent transversely to provide a second segment 8 which is angularly disposed with respect to the segment 7. Both segments 7 and 8 are provided with substantially centrally located apertures 9 and 10, adapted respectively to receive a bolt 11 secured in the top flat surface of the wooden leg 12. Apertures 9 and 10 may be threaded as at 9' and 10'. Bolt 11 may be provided with wood screw threads at its lower end for engaging the wood of leg 12, and machine screw threads at its upper end for direct engagement with 9' and 10'.

In the modification shown in Figs. 4 and 5 the plate is bent, as described above, to provide end flanges 13 and 14. On the inner edge of the horizontal segment 15 thereof, there is formed a reverse transverse bend as at 16 to provide a transverse ridge at 17 from which extends angularly disposed segment 18. Segments 15 and 18 are provided with substantially centrally located apertures 19 and 20 to receive the bolt 11 as shown. These apertures may be threaded so as directly to engage bolt. The leg may be provided as shown, with a caster 21 or other suitable gliding means. Segments 15 and 18 form in effect a double channel.

In Figs. 6 to 12 there are illustrated an attachment of a leg made of wrought iron or a bent metal rod by means of the plate shown in Figs. 4 and 5. However, the plate shown in Figs. 2 and 3 can likewise be used. The metal leg, formed of a rod bent at its middle to provide a foot portion 22. The upwardly extending portions 23 and 24 terminate in upper ends bent inwardly and horizontally toward each other as at 25 and 26 and then bent again at right angles to parts 25, 26 and also to parts 23 and 24 to provide two horizontal arms 27 and 28. A secondary plate 29 is provided with two grooves 30 and 31 and an aperture 32 for the reception of a threaded bolt 33. Plate 29 thus fastens arms 27 and 28 against either one of the segments 15 and 18 of the primary attaching plate. Figures 8, 9, 10 and 11 illustrate the adaptability of the secondary plates and the wrought iron leg. Four positions are shown, to provide vertically disposed legs and angularly disposed legs. Since the legs may be varied in length, it is evident that the invention permits the use thereof for widely divergent purposes, as for supporting tables, chairs, etc.

In Fig. 12 the horizontal arms 35 and 36 take the place of the horizontal arms 27 and 28 of Figs. 6 to 11. Arms 35 and 36 are preferably arcuate in form. The secondary plate 34 is provided with arcuate grooves 37 and 38 to receive the arms 35 and 36, respectively and hold them against segment 15. Plate 32 may be fastened to the segment 18 similarly to the manner of affixation showing in Figs. 10 and 11.

Referring now to Figures 13-16, a still further modified form of the device is shown wherein the plate structure is provided with longitudinal flanges in addition to the transverse flanges. Such longitudinal flanging provides addi-

tional means for affixing the device to the article to be elevated, and it also provides increased rigidity of the device and sturdiness of the furniture structure when assembled. This form of device, like the other forms, may be stamped out of a strip of metal or manufactured by any suitable means.

As shown in said Figures 13-16, the device or piece of hardware 40 having a peripheral flange 41 has two segments 42 and 43. Segment 42 is horizontally disposed when 40 is attached, for example to the underside of a flat horizontal table top. The second segment 43 is angularly disposed with respect to the segment 42. Each of the segments are provided with substantially centrally located apertures 44 and 45, respectively, adapted to receive bolt 46 projecting axially from the top surface 47 of the upper end of leg 48. The apertures may have internally extended walls as at 50 and 51 to provide increased internally threaded surfaces for the reception of bolt 46. Segments 42 and 43 may also be provided with circular ribs as 53 and 54, respectively. The peripheral flange 41 comprises the two longitudinal flanges 55, and the flanges 56 and 57 transverse thereto.

In addition to the openings 58 at the four corners of the device, the longitudinal flanges 55 may also have openings as at 60 and 61 to provide for insertion of attaching means, such as screws 62 for securing the piece of hardware to the underside of an article of furniture, as for example, table top 68. To provide space for 60 and 61 the segments 42 and 43 may be narrowed at their meeting line or area so as to increase the surface area of the longitudinal flanges in the regions of those holes as at 63 and 64. It will be understood that the meeting line of the peripheral flange and the segments 42 and 43 may vary from a sharply defined line to a smooth fairing; and likewise the walls of the segments may fair into the surfaces thereof which contact the tops of the leg.

It will be further noted, that the leg may be secured to either segment of the bracket to provide for the vertical or inclined attachment of the leg to the article of furniture. As is more clearly shown in Figures 14 and 15, the central connecting portions 63 and 64 that are common to both the horizontal and inclined segments 42, 43, serves as a partial bearing portion for both selected positions of the leg. Aside from providing a stable structure, this arrangement reduces the overall size of the bracket, resulting in a more attractive appearance and a lower cost.

It will be understood that the foregoing description of the invention and embodiments illustrated are merely illus-

trative of the principles of this invention. Accordingly, the appended claims are to be construed as defining the invention within the full sense and scope thereof.

I claim:

1. A device for attaching a leg to an article of manufacture comprising a rigid plate having a substantially flat peripheral portion, securement means associated with said peripheral portion for fastening said device to an article, said plate having substantially a centrally located embossment extending outwardly from the plane of said flat peripheral portion, said embossment including a plurality of angularly related segments, each of said segments having a bearing surface, and attachment means associated with each of said bearing surfaces for selectively securing a support leg thereto.

2. A device as set forth in claim 1, wherein said peripheral portion comprises a flange, and said securement means includes bores extending through said flange adapted to receive fastening elements therethrough.

3. A device as set forth in claim 2, wherein each of said segments is substantially flat and is adapted to form a continuous bearing surface.

4. A device for attaching a leg to an article of manufacture comprising a rigid plate, a substantially flat peripheral portion, securement means associated with said peripheral portion for fastening said device to an article to be supported, said plate having a centrally located embossment extending outwardly from the plane of said flat peripheral portion, said embossment including a plurality of angularly related segments, each of said segments having a bearing surface, one of said segments lying in a plane parallel to said flat peripheral portion, another of said segments lying in a plane angularly related thereto, and attachment means associated with each of said bearing surfaces for selectively securing a support leg thereto.

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