Nov. 15, 1955 J. HIRSCH 2,723,892

KNOCK-DOWN TYPE DETACHABLE LEG BRACKET

Filed Feb. 26, 1954 2 Sheets-Sheet 1

Fig. 1

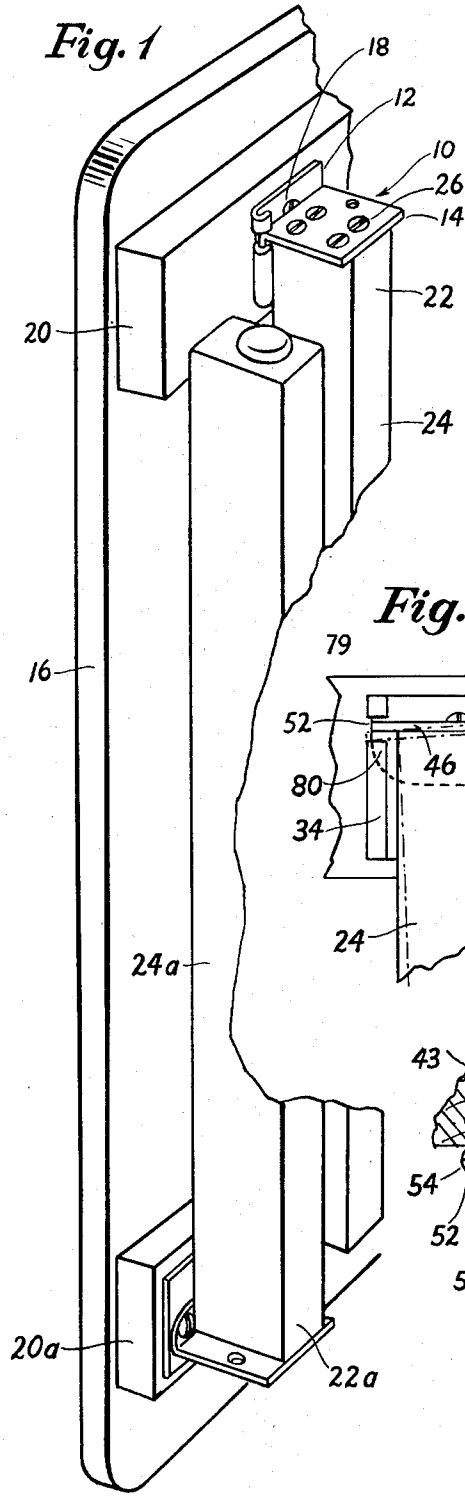


Fig. 2

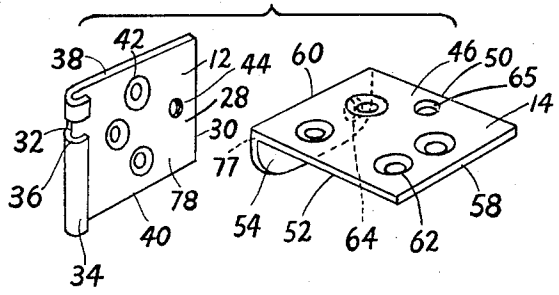
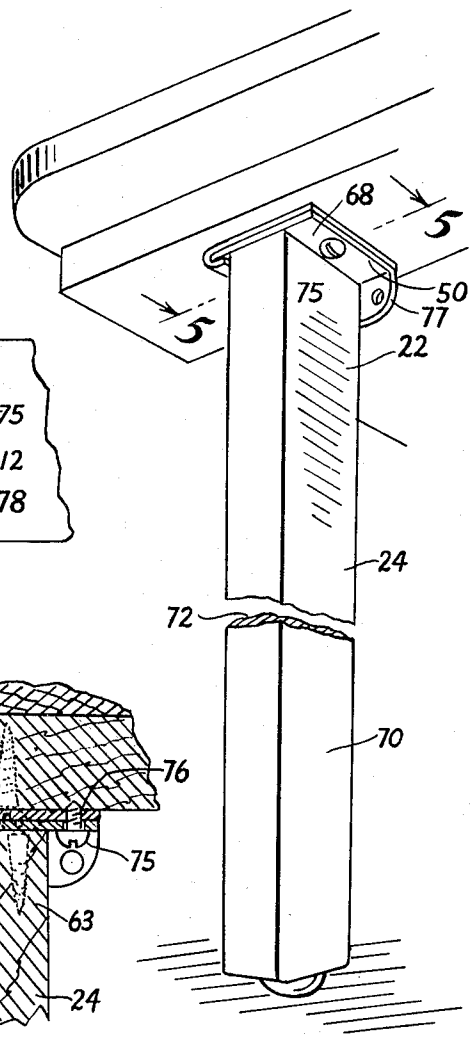


Fig. 3



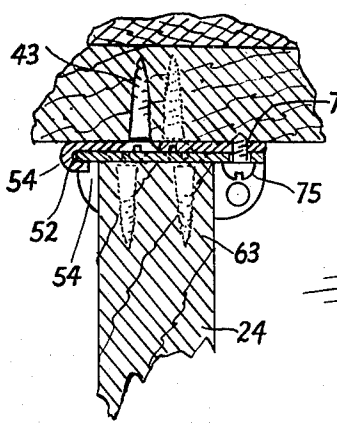


Fig. 5

Fig. 4

Nov. 15, 1955 J. HIRSCH 2,723,892

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Filed Feb. 26, 1954 2 Sheets-Sheet 2

Fig. 6

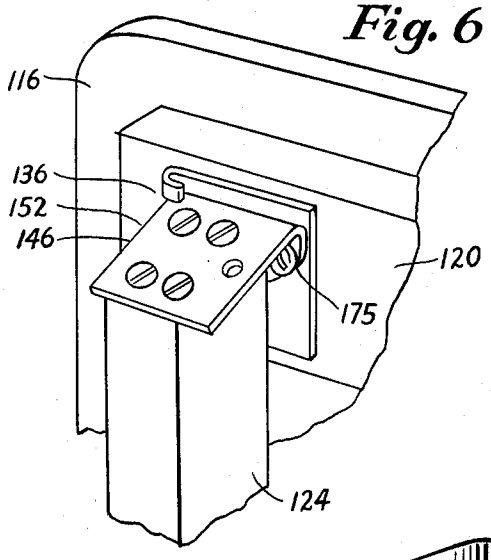


Fig. 9

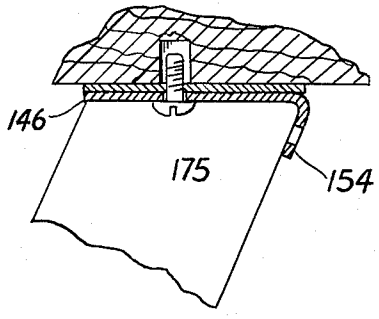


Fig. 7

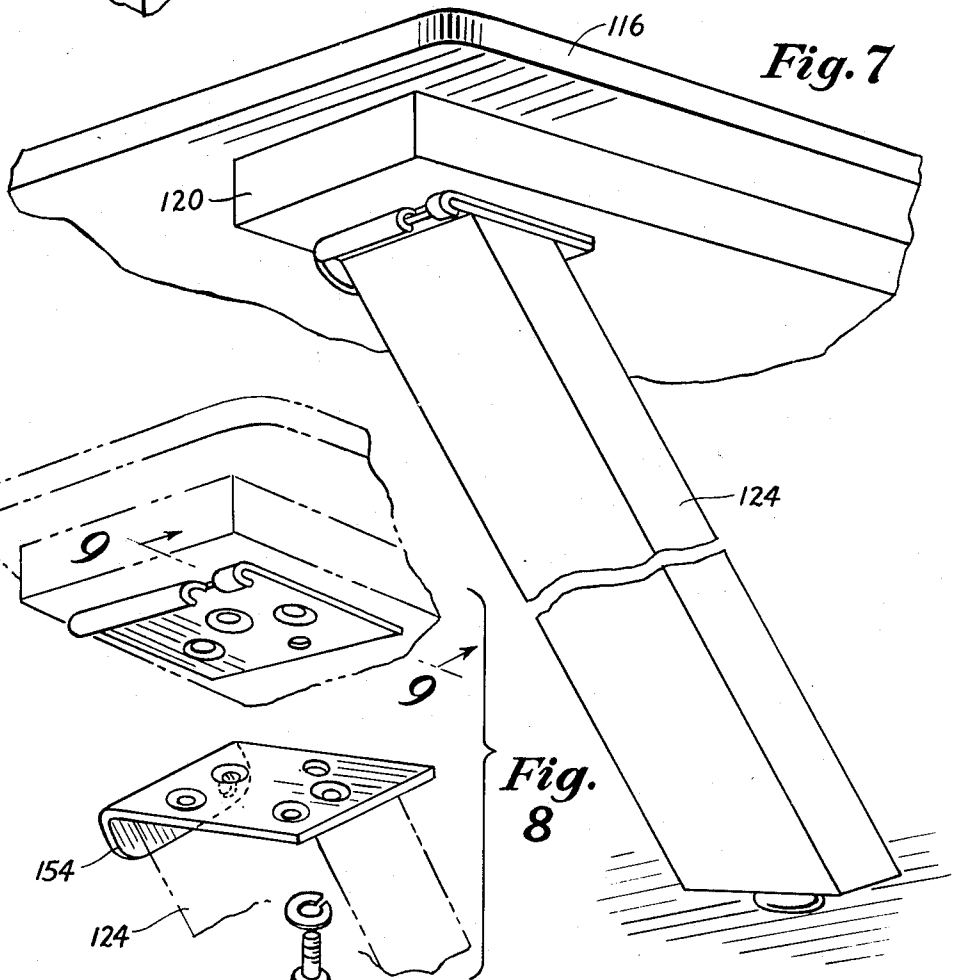


Fig. 8

United States Patent Office

2,723,892

Patented Nov. 15, 1955

2,723,892

KNOCK-DOWN TYPE DETACHABLE LEG BRACKET

Joseph Hirsch, New Rochelle, N. Y.

Application February 26, 1954, Serial No. 412,806

8 Claims. (Cl. 311—112)

This invention relates generally to brackets by means of which legs are connected to flat surfaces such as tables, chairs, and the like; and more particularly to such which are especially adapted to secure the leg in connection to such surfaces in both the set-up and knock-down condition.

Most frequently, furniture having legs is shipped in a set-up condition. The legs being relatively fragile projections are subject to the likelihood of damage in transit. In order to protect them, heavy cartons with padding of corrugated cardboard are used, and even more expensively, wooden crates are employed. The legs when shipped set-up are held in position by screws or dowels and glue. After a period of use, these joints loosen. Because when shipped set-up, the packing and shipping costs are higher, there is a need for an improved construction.

It is therefore among the objects of the present invention to provide a novel and useful improvement which will obviate the foregoing disadvantages.

Another object herein is to provide construction of the class described which can be used with furniture or similar structure having legs which, when set up, offer a wide range of angles with respect to the horizontal or similar surface with which they are used, and can be used with any object that has legs.

Another object of the present invention is to provide furniture construction having means for connecting legs to a platform whereby the legs may be folded flat against the underside of the platform laterally displaced with respect to each other so that they do not take up any more space than the thickness of a single leg. When the legs are folded flat, they lie side by side instead of overlapping.

A still further object herein is to provide structure of the class described which will afford lower production costs, lower packing costs, and lower shipping costs, while making a sturdy and long-lasting connection between the leg and platform elements when the article is set up.

A feature of the present construction is that it is easy to use, requiring no special skill or tools. An ordinary screw driver is all that is necessary and the same screw is used to secure the leg element in the knock-down and set-up positions.

These objects and other incidental ends and advantages will more fully appear in the progress of this disclosure and be pointed out in the appended claims.

In the drawings, similar reference characters designate corresponding parts throughout the several views, in each embodiment.

Figure 1 is a fragmentary view in perspective of a first embodiment, which in this view a pair of legs are in the knock-down side-by-side position with the table standing on one edge thereof.

Figure 2 is a view in perspective showing the table bracket element and the leg bracket element of Figure 1 in exploded position.

Figure 3 is a fragmentary elevational view as seen from the right of the upper portion of Figure 1.

Figure 4 is a view in perspective of a portion of the table shown in Figure 1 with a leg in a set-up position.

Figure 5 is a fragmentary vertical sectional view as seen from the plane 5—5 on Figure 4.

Figure 6 is a fragmentary perspective view corresponding generally to Figure 1, but showing a second embodiment of the invention.

Figure 7 is a fragmentary perspective view of table element and leg element interconnected in set-up position.

Figure 8 is a fragmentary view in perspective showing the parts of Figure 7 in exploded position.

Figure 9 is a fragmentary vertical sectional view as seen from plane 9—9 on Figure 8.

In accordance with the invention, the device, generally indicated by reference character **10** comprises broadly a platform bracket element **12** and a leg bracket element **14**. The platform bracket element may be connected to any suitable generally horizontal platform, such as the table top **16** shown, or other table tops, base elements of cabinets, chair seat elements, shelves, radio cabinets, or the like (not shown). Often, the table top **16** is of sufficient thickness to form a suitable anchorage for the platform bracket element means **18** which may well take the form of ordinary wood screws. When the table top element is thin, a cleat or similar transverse support **20** may be utilized.

The leg bracket element is secured in a suitable manner to the upper end **22** of a leg **24**, for example, by the means **26**, which may take the form of ordinary wood screws.

Turning to Figure 2, the platform bracket element **12** may include a body **28** having a first edge **30**, a second edge **32**, a locking flange **34** with a notch **36**, and opposed third and fourth edges **38** and **40**. The body **28** is provided with a plurality of screw receiving holes **42** (for screws **43**), and with a threaded hole **44**. The platform bracket element **12** is preferably formed by blanking and bending the same from suitable sheet stock, as for example sheet steel.

The leg bracket element **14** has a body **46** including a first edge **50**, a second edge **52**, a third edge **58** and a fourth edge **60**. Extending at substantially a right angle from the edge **60** is the securing flange **54** which is provided with a knock-down position threadless hole **64**. The body **46** has a plurality of screw receiving holes **62** (for screws **63**). The body adjacent the edge **50** has a set-up position threadless hole **65**. The upper end **22** of the leg **24** has a width which is substantially less than the distance between the first and second edges **50** and **52**, so that when the upper end **22** is connected to the relatively undersurface (Figure 4), the leg surface **70** is spaced a substantial distance from the edge **50**, while the leg surface **72** is spaced a substantial distance from the edge **52**. The space provided inwardly of the edge **50** leaves the threadless hole **65** accessible, while the space inwardly of the edge **52** permits said edge to project a substantial distance so that it may be seated under the locking flange **34** when the leg is in a set-up position (Figures 4 and 5).

In the set-up position, the parts are maintained in interengagement by a screw **75** which passes through the threadless hole **65** and engages the threaded hole **44**. The inner end of the screw **75** is preferably pointed as at **76** so that it may be assured that all of the threads on the threaded hole **44** are engaged by threads of the screw **75** and any inward or excess projection of the screw **75** may be accommodated by a compression of the platform or table-top **16**. If desired, a longer type screw **75** may be used and the undersurface of the table-top may be counterbored (see Figure 9).

In the knock-down position, the securing flange **54** has the outer surface **77** thereof (Figure 2) in engagement with the undersurface **78** of the platform bracket ele-

ment **12**. This position is shown in Figures 1 and 3 where it will be seen that one end of the securing flange is engaged between the locking flange **34** and said undersurface **78**, while the other end of the securing flange **54** is held in place by the same screw **75** which passes through the threadless hole **64** and engages the threaded hole **44**.

The edge **52** enters the notch **36** which is of sufficient width so that between the edges **79** and **80** thereof the securing flange **54** may have substantial movement as the leg **24** is pivoted about the screw **75** as a center.

The purpose of this pivoting is to allow the legs which are normally juxtaposed on an article of furniture when knocked down to be shifted with respect to each other so that they may have a side-by-side relationship such as shown in Figure 1. Here, for the purpose of avoiding repetition, the second leg is given certain of the prior used reference characters with the addition of the suffix "*a*."

Turning now to the second embodiment of the invention shown in Figures 6 to 9, inclusive, for the purpose of avoiding unnecessary repetition, certain of the parts corresponding to those of the first embodiment are given the same reference characters with the prefix "1."

The principal difference between the first and second embodiments is that in the second embodiment, the leg **124** is adapted to be disposed at an angle with respect to the table-top **116** when the article of furniture is in a set-up condition.

As best seen in Figures 8 and 9, the securing flange **154** is angularly disposed with respect to the body **146**. Because of this angular arrangement, when the leg **124** is in the knock-down position thereof, the same will lie close and parallel to the undersurface of the table-top **116**. Here again, the notch **136** coacts with the edge **152** to allow the leg **124** to pivot about the screw **175**. As seen in Figure 8, after the legs, which are lying in side-by-side relationship are in proper position, a lock washer which surrounds the screw **175** will assist in preventing undesirable movement of said legs during shipment in knock-down position.

It may thus be seen that I have provided a novel and useful furniture construction in which the leg elements and platform elements may be easily and quickly provided with corresponding bracket elements, and which may easily and quickly be arranged in knock-down or set-up position. In either position the parts are securely connected.

An incident advantage of the present construction lies in the fact that under certain circumstances the legs may be supported independently of the platform or similar elements and may also be supplied in sets of varying sizes so that the dealer may offer the particular article of furniture at different heights, the same top, for example, being utilized to form a low coffee table, a medium height coffee table, a regular height table, and so on.

By virtue of the saving obtained in the elimination of fitted joints and gluing, the present construction may be accomplished at little or no increase in cost over earlier less satisfactory constructions.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art to which the present invention relates.

I claim:

1. Knock-down type furniture leg and platform construction comprising: a platform bracket element having a substantially flat body with a locking flange projecting therefrom; a leg bracket element having a substantially flat body and an angularly disposed securing flange; said leg bracket element in the knock-down position thereof having the secured flange juxtaposing the body of the platform bracket element and in the set-up position thereof having the body of said leg bracket element juxtaposing said body of said platform bracket element.

2. Structure as claimed in claim 1 wherein the platform bracket element has a threaded orifice and the leg bracket element has a first opening in the body thereof and a second opening in the securing flange; and means freely passable through said opening in the leg bracket element and detachably engageable with said platform bracket element.

3. Knock-down type furniture leg and platform construction comprising: a platform bracket element having a body and a locking flange with a notch therein; and a leg bracket element having a body and a securing flange, and means to detachably interconnect said securing flange body and said leg bracket body to said platform bracket element in a plurality of positions; in a knock-down position said securing flange being engaged by said locking flange and a portion of the body of the leg bracket element being disposed within said notch; and in the set-up position thereof, the body of the leg bracket element being engaged by said locking flange.

4. Furniture construction comprising: a platform element; a leg element; a platform bracket element secured to said platform element; a leg bracket element secured to said leg element; said platform bracket element having a body and a locking flange; said leg bracket element having a body and a securing flange, and means in the set-up position of said parts to detachably secure the body of the leg bracket element to the body of the platform bracket element, and in the knock-down position thereof to detachably secure the securing flange to the body of the platform bracket element.

5. Furniture construction comprising: a platform element; a leg element; a platform bracket element secured to said platform element; a leg bracket element secured to said leg element; said platform bracket element having a body and a locking flange; said leg bracket element having a body and a securing flange, and means in the set-up position of said parts to detachably secure the body of the leg bracket element to the body of the platform bracket element, and in the knock-down position thereof to detachably secure the securing flange to the body of the platform bracket element; and means providing limited pivotal movement of said leg element with respect to said platform element when the leg element is in the knock-down position thereof.

6. Structure as claimed in claim 4 in which the securing flange forms an angle with respect to the body of the leg bracket element.

7. Structure as claimed in claim 4 in which the securing flange forms an acute angle with respect to the body of the leg bracket element.

8. Furniture construction comprising: a platform element; a pair of leg elements spaced from each other and detachably connectable to said platform element; means fixedly securing said leg elements in the set-up position thereof to said platform element; and means holding said leg elements to said platform element, in the knock-down position of said leg elements; and affording limited movement of said leg elements in a plane spaced from and parallel to the platform element; whereby said leg elements in the knock-down position thereof may have a lateral side-by-side arrangement.

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