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COLLAPSIBLE TABLE LEG HINGE AND LATCH STRUCTURE

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2 Sheets-Sheet 2

Fig. 4.

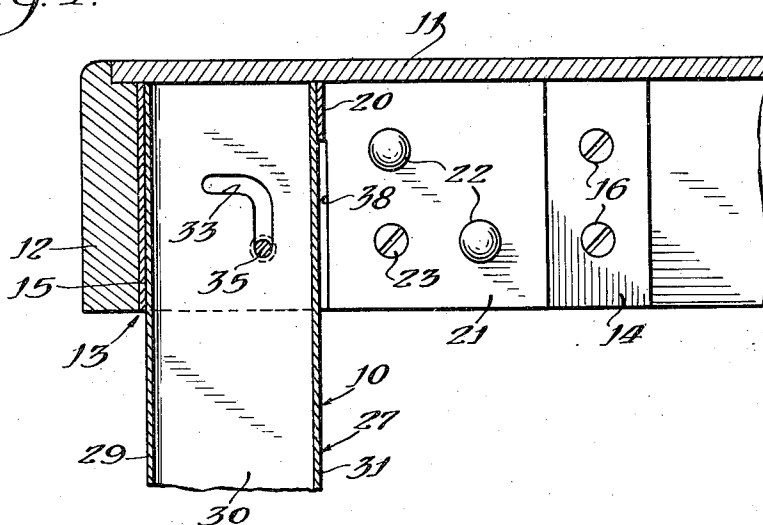


Fig. 5.

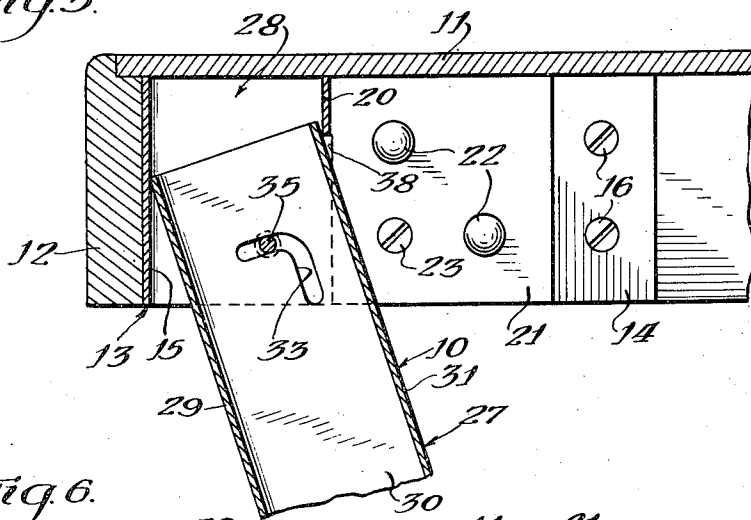
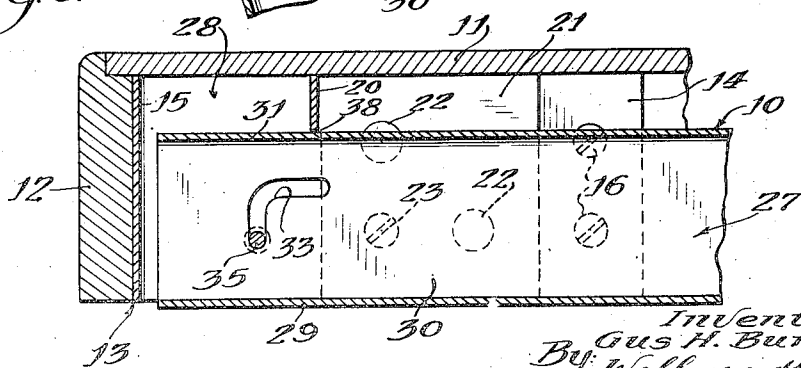


Fig. 6.



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COLLAPSIBLE TABLE LEG HINGE AND
LATCH STRUCTUREGus H. Burr, River Grove, Ill., assignor, by mesne
assignments, to Harry M. Wolfe, Chicago, Ill.

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2 Claims. (Cl. 311—99)

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This invention relates to collapsible table leg hinge and latch structures for use upon folding card tables and the like.

An object of the present invention is to provide a new and improved collapsible table leg hinge and latch structure for use upon folding card tables and the like.

An additional object of the present invention is to provide a new and improved collapsible table leg hinge and latch structure for use in conjunction with folding card tables and the like embodying a hollow metallic upper leg portion.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings which, by way of illustration, show preferred embodiments and the principles thereof and what I now consider to be the best mode in which I have contemplated applying those principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

Fig. 1 is a fragmentary view of a corner portion of a collapsible table, partly in section and partly in elevation, embodying the new collapsible table leg hinge and latch structure;

Fig. 2 is a top horizontal sectional plan view, on line 2—2 in Fig. 1;

Fig. 3 is a view on line 3—3 in Fig. 1, partly in section and partly in elevation;

Fig. 4 is a central vertical sectional view of the corner portion of a collapsible table embodying the present invention and illustrating the relative positions of the parts of the new table leg hinge and latch structure when the table leg is latched in fully raised and effective table-supporting position;

Fig. 5 is a vertical sectional view, similar to Fig. 4, but showing the relative positions of the parts of the new table leg hinge and latch structure when the table leg has been lowered and has been pivoted partially into raised and collapsed position; and

Fig. 6 is a central vertical sectional view showing the relative positions of the parts of the new collapsible table leg hinge and latch structure when the table leg has been moved into fully raised and collapsed position below the table top.

A preferred and typical embodiment of the present invention is illustrated in the drawings, wherein it is generally indicated at 10, and is shown as being operatively associated with a collapsible table which includes a wooden table top 11 and a wooden table top-supporting frame 12. The table top-supporting frame 12 has a metallic corner-reinforcing member 13 attached thereto. This metallic corner-reinforcing member 13

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is substantially L-shaped in form and includes a pair of arms 14 and 15 having end portions which are attached, by means of fastening elements 16 and 17, respectively, to the table top-supporting frame 12 (Figs. 1 and 2).

The new table leg hinge and latch structure includes a metallic combination guiding and latching member 18 which is shown in top plan in Fig. 2, and which comprises a pair of right angularly intersecting arm portions 19 and 20. The arm 19 has an attaching extension or portion 24 and the arm 20 has an attaching extension or portion 21, these attaching extensions 24 and 20 extending at right angles to and being integral with the arms 19 and 20, respectively. The attaching extension 24 is attached, by means of fastening elements in the form of headed rivets 25, to the arm 15 of the corner-reinforcing member 13, the inner end portions of the rivets 25 being preferably spot welded to the arm 15 of the corner-reinforcing member 13. Similarly, the attaching extension 21 is attached by fastening means, in the form of headed rivets 22, to the arm 14 of the corner-reinforcing member 13, the inner end portions of the rivets 22 being preferably spot welded to the arm 21 of the corner-reinforcing member 13.

In order to complete the mounting of the thus interconnected members 13 and 18 fastening elements, such as screws 23, may be inserted through suitable holes formed in the parallel contacting arms 14 and 21 of the members 13 and 18, into the table top-supporting frame 12, and similar fastening elements, such as screws 26 (Figs. 2 and 3) may be inserted through suitable holes in the parallel contacting arms 15 and 24 of the members 13 and 18 into the table top-supporting frame 12.

As shown in Figs. 2, 5 and 6 the right angularly intersecting arms 19 and 20 of the combination guiding and latching member 18 cooperate with the right angularly intersecting arms 14 and 15 of the corner reinforcing member 13 to provide a vertically extending and substantially square guideway 28 for the hollow metallic upper end portion of a collapsible table leg 27 which has a limited vertically slidable movement in the guideway 28 thus formed.

The upper end portion of the collapsible table leg 27 includes four side walls 29, 30, 31 and 32. A generally L-shaped slot 33 is formed in the upper portion of the side wall 30 of the table leg 27 (Figs. 4, 5 and 6) and a similar substantially L-shaped slot 34 is formed in the upper portion of the side wall 32 of the table leg 27 (Fig. 1). A hinge bolt or pin 35 extends through the slot 34. One end portion of the hinge bolt or pin 35 is fastened in any suitable manner, as by spot welding, as at 36 (Fig. 2), to the attaching arm 14 of the corner-reinforcing member 13, and the other

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end portion of the hinge bolt 35 is threaded and has a nut 37 threaded thereon exteriorly of the arm or wall 19 of the combination guiding and latching member 18 (Figs. 1, 2 and 3).

As shown in Figs. 1, 3, 4, 5 and 6, the side wall 20 of the combination guiding and latching member 18 is in the form of a relatively narrow web, considered in its vertical width or height, from top to bottom, the lower portion thereof being cut away, as at 38, to allow the table leg 27 to pivot through the opening thus provided by the cut-out portion 38. As will be explained herein after, the relatively narrow web or side wall 20 of the combination guiding and latching member 18 provides a latch member for retaining the table leg 27 in fully raised and table-supporting position, as in Fig. 6.

The use and operation of the new collapsible table leg hinge and latch structure are as follows:

When a table embodying the new collapsible table leg hinge and latch structure is not in use the table leg 27 may be collapsed in horizontal position under the table top 11, as in Fig. 6. When it is desired to move the table leg 27 into effective or upright and table-supporting position, this may be readily accomplished by manually grasping the table leg 27 and pivoting the same, upon the hinge bolt or pin 35 as a hinge or pivot, from the position in which the table leg 27 is shown in Fig. 6, into and through the partially erected but inclined position in which it is shown in Fig. 5, and thence into an entirely vertically extending position with the four walls 29, 30, 31 and 32 of the table leg 27 arranged within the area defined by confines of the substantially square vertically extending guideway provided by the arms 19 and 20 of the combination guiding and latching member and the arms 14 and 15 of the corner reinforcing member 13. At this time, however, the upper edge portion of the table leg 27 is disposed somewhat below the relatively narrow side wall or latching web 20 of the member 18. The table leg 27 is then manually grasped and pushed or slid upwardly in the vertically extending guideway 28 so that the upper end portion of the side wall 31 of the table leg 27 passes behind or inwardly of the relatively narrow side wall or latching web 20 of the member 18, and the other side walls 29, 30 and 32 of the table leg 27 are disposed parallel to and in contact with the parts 15, 14 and 19, respectively (Fig. 2). The table leg 27 is thus latched in upright or table-supporting position, as in Figs. 1 and 4, and is prevented from swinging or pivoting about its hinge bolt or pin 35 by the restraining action of the latching web 20 in cooperation with the other three walls 15, 14 and 19 of the guideway 28. The hinge bolt or pin 35 is then disposed in and relative to the slot 33 in the position in which the parts are shown in Figs. 1 and 4.

In order to collapse the table leg 27 it is merely necessary for the user manually to grasp the table leg 27 and pull downwardly on the same until the upper edge portion of the side wall 31 of the table leg 27 comes just below the bottom edge of the relatively narrow side wall or latching web 20 of the member 18, whereupon the table leg 27 may be pivoted about its hinge bolt or pin 35, into the partially collapsed but inclined position in which it is shown in Fig. 5, and thence into the fully collapsed horizontal position in which it is shown in Fig. 6. During this operation the slotted portions 33 and 34 of the side walls 30 and 32 of the table leg 27 move relative to the stationary

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hinge bolt or pin 35, from the position in which the parts are shown in Fig. 4, through the position in which the parts are shown in Fig. 5; and into the fully collapsed horizontal position in which the parts are shown in Fig. 6.

It will thus be seen from the following description, considered in conjunction with the accompanying drawings, that the present invention provides a new and improved collapsible table leg hinge and latch structure, having the desirable advantages and characteristics, and accomplishing its intended objects, including those hereinbefore pointed out, and others which are inherent in the invention.

I claim:

1. A bracket for supporting, guiding and latching a foldable table leg positioned in the interior corner of a table including a top and depending side flanges at the corner, the bracket being substantially right angularly shaped and including an arm at each inner surface of the inner side flanges of the table, a right angularly shaped socket forming element carried by the bracket at its corner with its right portion in diagonal alignment with the right portion of the bracket and forming a hollow table leg receiving socket thereat, at least three walls of the socket being substantially of the same depth as the inner depth of the side flanges, the other wall of the socket which is of considerably less depth than the said three walls and is at the inner end of the socket constitutes a latch for the table leg and results in an opening in the socket, a hinge pin for the table leg attached to the bracket at one end and extending through aligned substantially L-shaped openings in opposite sides of the table leg and extending into and through an opening in the wall of the socket forming element, the axis of which pin is parallel with the plane of the wall of less depth and is below the bottom edge thereof and is in and to the side of the vertical center of the socket that is adjacent the opening so that when the leg is disposed vertically within the socket, the same frictionally engages the walls thereof and is maintained in its vertical position by the latch and when the leg is slid outwardly of the socket the same may be pivoted on the pin and swung through the opening in the socket to a position substantially parallel with the under side of the table top.

2. A structure as defined in and by claim 1 wherein the walls of the right angularly shaped socket forming element are provided with lateral extensions parallel to and in abutment with the respective arms of the bracket and wherein means are provided to attach the said abutting walls and arms together and wherein additional means are provided for attaching both the bracket and the socket forming element to the inner side flanges of the table top.

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