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U. K. JOHANNSEN

2,318,945

FOLDING TABLE LATCH

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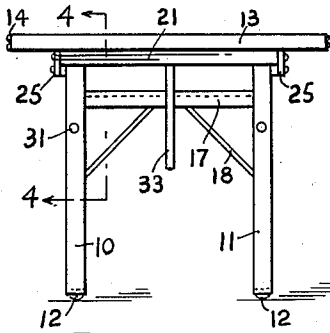


Fig. 1.

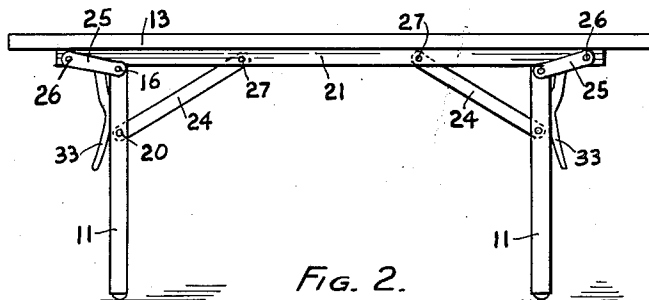


Fig. 2.

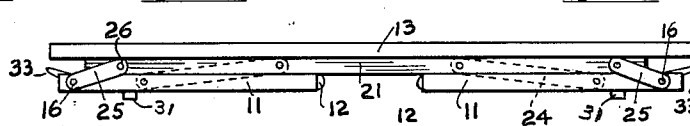


Fig. 3.

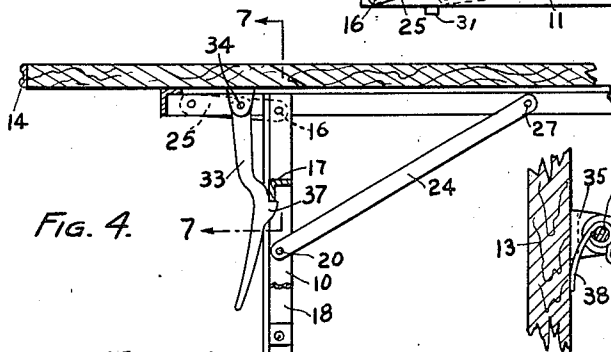


Fig. 4.

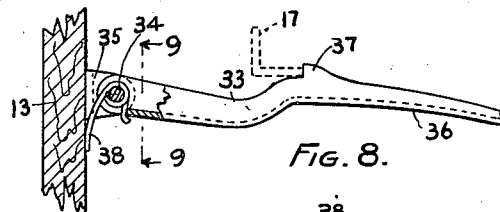


Fig. 8.

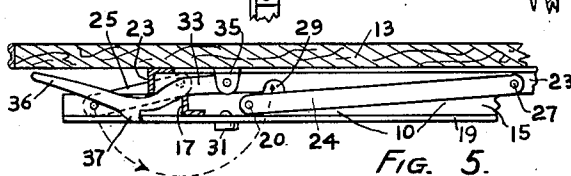


Fig. 5.

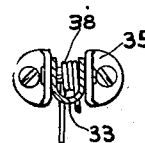


Fig. 9.

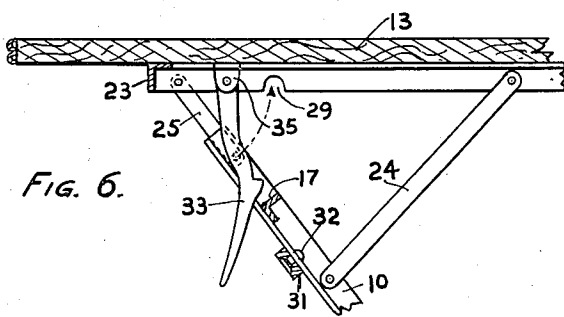


Fig. 6.

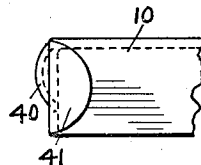


Fig. 11.

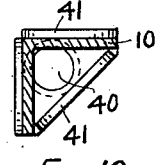


Fig. 10.

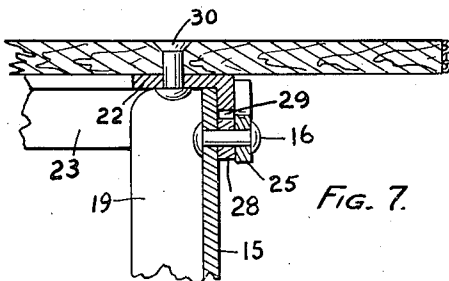


Fig. 7.

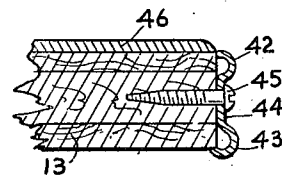


Fig. 12.

INVENTOR.

BY

UDO K. JOHANNSEN
Louis Illmer.
ATTORNEY

UNITED STATES PATENT OFFICE

2,318,945

FOLDING TABLE LATCH

Udo K. Johannsen, Cortland, N. Y., assignor to
The Brewer-Titchener Corporation, Cortland,
N. Y., a corporation of New York

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4 Claims. (Cl. 311—87)

My invention broadly relates to a portable folding table and is more particularly directed to an improved leg latch for collapsible banqueting tables or the like, having a four-legged metal understructure in which mated legs are independently operable in pairs and adapted to compactly infold about companion guide linkages when not extended for use.

The complementary guide links herein resorted to are preferably of a kind more explicitly defined in my prior Patent No. 2,075,778 issued March 30, 1937. While such linkage has been found wholly suitable for ordinary purposes, it has proved deficient in certain respects when erected tables of this type are being skidded lengthwise along a sustaining floor into end to end row formation for banqueting needs. Under such severe service there is a tendency to wedgingly lift an unloaded table board and thereby allow one pair of erected legs to initiate collapse. In order to obviate such behavior, I have now devised a releasable interlock that automatically follows up and positively retains the erected legs against unwanted skidding collapse.

Such leverized latch is further provided with cam means that actuates the latch to clear itself while the table legs are being manipulated.

The object of the present improvements is to provide for a sturdy but inherently light weight table of the character indicated in which the link guided leg ends shall under all conditions be latched against inadvertent collapse after the respective legs have been brought into erected position.

Embodied herein are associated structural features such as effective foot pad means and other aspects designed to facilitate the economical manufacture and operation of the foldable table parts. Reference is had to the accompanying one drawing sheet which is illustrative of a certain preferred exemplification, and in which drawing:

Fig. 1 represents an elevational end view of an erected folding table equipped with my improved devices, and Fig. 2 is a side view thereof.

Fig. 3 shows a side view of the table understructure in its fully collapsed position.

Figs. 4 to 6, inclusive, respectively detail in enlarged scale, different foldable linkage positions as seen from the line 4—4 of Fig. 1, and Fig. 7 depicts a fragmental sectional view along 7—7 of Fig. 4.

Fig. 8 details a stamped latch lever, and Fig. 9 reveals a suitable fulcrum thereof as taken along 9—9 of Fig. 8.

Figs. 10 and 11 respectively detail a domed foot pad shaped to embrace the floor contacting end of a table leg.

Fig. 12 cross-sectionally shows a corrugated moulding arranged to protect the board edge against abrasive action.

Referring more specifically to the drawing, 10 and 11 respectively designate one pair of inter-braced mated legs fabricated to length from relatively thin angle iron stock, of which each free end may be telescopically embraced by an attached foot pad 12 of the kind that will presently be more explicitly described. When erected, each cross-sectionally angle shaped leg is placed cornerwise of the oblong table top 13 and respectively includes a side flange 15 and an inturned flange 19.

Said top may be made of plywood or the like laminated board material and have a moulding 14 tacked around the marginal edge thereof. The respective leg side flanges 15 are each apertured contiguous to the upper leg ends for receiving a guide pivot 16 therethrough. A strap or a cross-sectionally angle shaped rung or other hook engaging means 17 may be secured to the upper region of a mated leg, preferably with one edge directed toward the other leg end. Additional lateral rigidity may be imparted by the use of a V tie strut 18 or the like reenforcement of which the apex may be braced to said rung and the divergent strut ends respectively affixed to a side flange of the mated table legs, as shown. Such interconnecting truss not only steadies the legs against spread but permits one of a pair of legs to be actuated by the manipulation of a mated leg. Each side flange of the several legs may further be provided with a brace link pivot 20 located between the guide pivot 16 and its leg foot.

A skeletonized metal framework 21 (see Figs. 1 and 2) may be firmly secured beneath the elongated top 13 by flat headed rivets 30 so as to constitute laterally reenforced board structure. Such board understructure preferably comprises intersecting pairs of angle iron side and end rails formed into a hollow quadrilateral shape of which the planiform flange 22 is disposed to lie flatwise against the board and the endless complementary or depending flange 23 extends outwardly from the top board in an inset relation to the perimeter trim strip 14. In certain instances such elongated understructure may likewise be applied to a round table top. The overall spacing of the erected legs is purposely confined well within the board edge and arranged to comfortably

clear the knees of persons closely seated around my table.

Referring now to the preferred mode of pivotally attaching each upper leg end to said framework, this may be accomplished by the use of companion links such as a relatively long brace link 24 and a relatively shorter guide link 25. The depending flange of each side rail of my framework is provided with complementary pairs of link pivots on which the guide link pivots 26 are located in close proximity to the respective rail ends. The companion brace link pivots such as 27 are spacedly interposed between said pivots 26. In erected table position the guide links 25 are respectively directed inwardly toward a corresponding upper leg pivot 16 to fall into substantial alignment with an adjoining framework rail.

Each guide link when riveted to its rail by the pivot 26 may be kept away from the contiguous leg end by the use of a cylindrical spacer agency 28. The depending rail flange 23 may be notched at 29 for the reception of said spacer in erected leg position. This notch permits the guide link 25 to fall into closer alignment with the framework rail, although such expedient is non-essential as far as present purposes are concerned.

When the leg pairs are collapsed, the several guide links extend outwardly away from their respective pivots 26 in the fashion represented in Fig. 3 and the leg side flanges 15 then fall into aligned registry upon a contiguous edge of the endless frame rail 23. My table top is preferably of sufficient length to provide for a clearance space between the foot ends of the non-overlapping folded legs. Such collapsed tables may be compactly stacked in regular order for storage or lot shipment. To protect painted or sprayed table legs against superficial injury, I preferably provide each leg side flange 15 with a cupped resilient buffer 31 of rubber or the like material. As cross-sectionally indicated in Fig. 6, such outstanding buffer may be exteriorly secured by a countersunk rivet 32 and allows the next adjacent polished stacked top to cushioningly rest thereon in stacked flatwise fashion without scruffing.

When the table is to be extended for use, each pair of mated legs is independently manipulated into erected position and swings through the intermediate position represented in Fig. 6. The upper leg end is conjointly steered into place by the links 24 and 25. By pulling an erected leg end outwardly away from the flange 22, the corresponding spacer 28 becomes disengaged, which thereupon allows each leg pair to freely assume collapsed position.

In setting up a row of such relatively long tables in end to end formation for banquet needs, they are after erection, likely to be skidded for some distance lengthwise of a floor. In order to obviate any partial leg collapse, I have found it expedient to provide for a leg retaining latch 33. Such releasable interlock may assume various configurations but is preferably devised as a trough shaped stamped lever of sheet metal that may be pivotally attached at 34 beneath the top board by a centralized fulcrum bracket 35 (see Fig. 8), said lever being longitudinally crooked to clear the collapsed rung 17 and its adjacent depending flange 23 as in Fig. 5. When serving mated legs, such common lever may terminate in a manipulative handle 36 and have an undercut catch or hooked nose 37 disposed intermediate the lever ends. In erected leg position, said latch preferably engages the depending rung edge in

the Fig. 4 manner, there being a return spring 38 or the like means that releasably retains said latch in operative position. While engaged, the erected table legs cannot become separated from the top 13 even should the floor contacting leg ends be skidded.

To release said latch, the handle 36 is deliberately rocked outwardly away from the rung 17. A pertinent feature of the present latch device resides in having the rounded edge of the angular rung 17 wipe in cam fashion along the irregular inner nose contour to rockingly actuate and automatically carry said lever against spring tension into its inoperative Fig. 5 position whereby to compactly stow the same within the collapsed leg confines. By raising either one of the mated legs 10 or 11, the rounded rung edge will again wipe unobstructedly in a reverse direction and allow the spring 38 to automatically throw the lever latch 37 into its engaged Fig. 4 position. It may be emphasized that in lieu of the rung 17, the same hooking result is to be had by a non-centralized latch lever when made to engage a substitute lug or stanchion carried by one of the mated table legs.

To further counteract the drag effect of a skidded leg, it is preferred to trim each floor contacting leg end with an improved foot pad 12 preferably stamped from sheet metal to comprise a triangular base plate 40 that is cross-sectionally dome shaped for smooth gliding contact along a hard floor at the minimum of frictional drag. The respective plate edges may each be upturned into a leg gripping lip such as 41 (see Figs. 10 and 11), certain of which lips being permanently affixed to an embraced leg end.

As regards the corrugated wear moulding 14, its profile may be cross-sectionally shaped to provide for opposed partially closed marginal beads such as 42 and 43 that are interconnected by an integral bridge strip component 44 (see Fig. 12). The respective bead edges are shown disposed in perpendicular relation. The edge of the bead 42 may lie flush with the upper face of the top board as shown, while the edge of the bead 43 is inset to extend beneath said board in an abutting relation to the bottom face thereof. The perforated bridge strip may be tightly and rapidly tacked in place by a series of drive screws 45. Said beads protect the board against abrasion when set up edgewise to facilitate folding of the table legs. If desired, a thin sheet of Masonite or other colored plastic laminate 46 may be applied as a veneer to decorate my table top.

Other advantages inherent in the assembly of my foldable table improvements are believed apparent to those skilled in this art, it being obvious that modifications in the details thereof may readily be resorted to in likewise carrying out the same underlying structural principles, provided they come within the scope of the claims.

I claim:

1. A portable banquet table of the collapsible type adapted to manipulatively unfold into erected position and be slidably upheld by floor means, said table comprising a top board structure, mated foldable legs at opposite regions of said structure and which several legs respectively have an upper end that is shiftable lengthwise of a board face, a relatively short guide link and a longer companion brace link respectively pivoted to each table leg and also to the board structure, said links being arranged to conjointly steer an

upper leg end into and out of erected abutment with said face, hook engaging means secured to one such leg to move in unison therewith, latch lever means of which one end is pivotally mounted on the board structure in an interposed relation to the corresponding guide link and brace link board pivots, said lever in a region remote from its pivot being provided with a hook nose profile disposed to automatically latch said one leg against separation from its abutting board face, and means urging said lever into maintained contact with the hook engaging means and which hook engaging means serves to rock the lever counterwise to such urge alongside said board face when said leg is collapsed.

2. A collapsible table or the like adapted to unfold into erected position, said table comprising a top board structure, mated foldable legs at opposite regions of said structure and which several legs respectively have an upper end that is shiftable lengthwise of and toward or away from a board face, a relatively short guide link and a longer companion brace link for each such leg, said links being respectively pivoted to the leg thereof and also to the board structure and arranged to conjointly steer an upper leg end toward said face into erected position, rung means interconnecting a pair of such mated legs, latch lever means of which one end is pivotally mounted on the board, said lever intermediate its ends being provided with a hook nose profile adapted to latch said pair of rung interconnected legs against separation from the board face when erected thereon, and means urging said lever into maintained engagement with said rung means and which rung means serves to rock the lever counterwise to such urge into a position alongside said board face when the last named pair of legs are collapsed.

3. A collapsible table or the like adapted to manipulatively unfold into erected position, said table comprising a top board structure, mated

foldable legs at opposite regions of said structure and which several legs respectively have an upper end that is shiftable lengthwise of a board face, a relatively short guide link and a longer companion brace link for each such leg respectively pivoted to conjointly steer the upper leg end thereof toward said face into erected position, hook engaging means carried by a foldable leg and which means is located inwardly from the leg pivot of its corresponding guide link, and a spring urged latch lever provided with a nosed profile disposed to automatically latch said hook engaging means when the corresponding steered upper leg end is brought into erected position, said hook engaging means upon being released serving to wipe lengthwise of said profile to positively actuate the lever against spring tension.

4. A collapsible table or the like adapted to manipulatively unfold into erected position, said table comprising a top board structure, mated foldable legs at opposite regions of said structure and which legs respectively have an upper end that is shiftable lengthwise of a board face, a relatively short guide link and a longer companion brace link for each such leg respectively pivoted to conjointly steer an upper leg end thereof toward said face into erected position, rung means interconnecting a pair of such mated legs, and a longitudinally crooked latch lever pivoted to the board structure, said lever intermediate its ends being provided with a hook nose profile adapted to latch said pair of rung interconnected legs against separation from the board face when erected thereon, and means urging the lever into maintained engagement with said rung means and which rung means serves to carry the lever counterwise to such urge into a position alongside said board in an underlying relation to the rung means when the last named pair of legs are collapsed.

UDO K. JOHANNSEN.