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PIVOT AND LATCH STRUCTURE FOR TABLE LEGS

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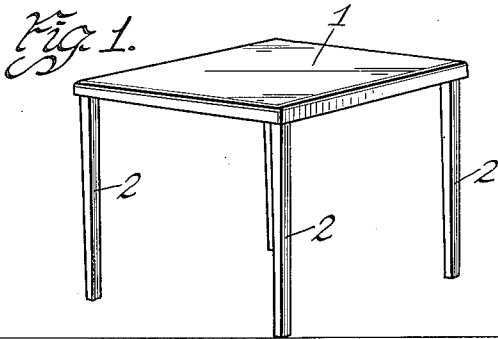
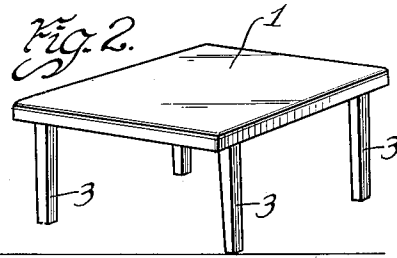
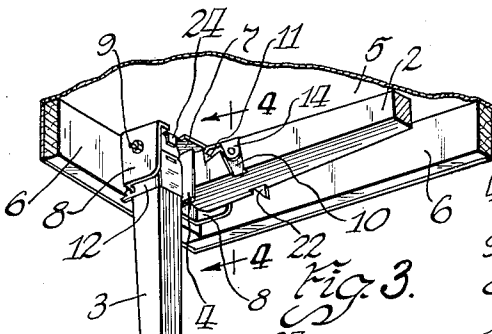
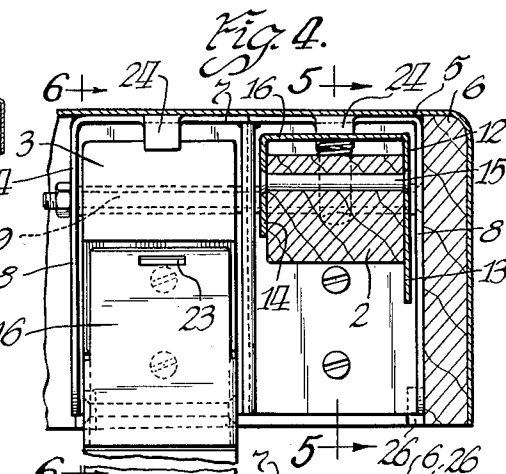
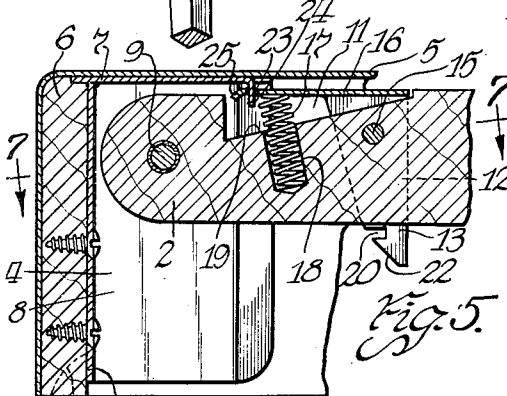
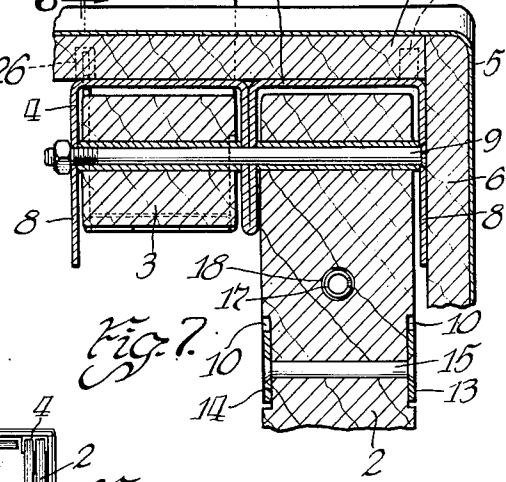
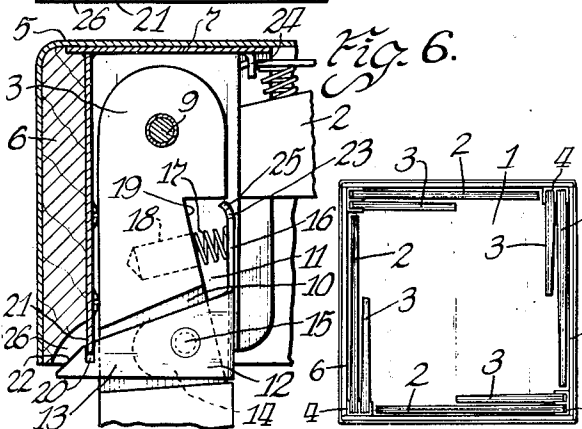


Fig. 8.

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UNITED STATES PATENT OFFICE

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PIVOT AND LATCH STRUCTURE
FOR TABLE LEGS

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1 Claim. (Cl. 311—99)

1

My invention relates to tables, and more specifically to tables of a folding or collapsible type.

The principal object of my invention is to provide a table which can be folded flat for storage or transporting, and which can be erected alternatively at a standard height for collapsible tables, or at a lower than standard height, thus making available the multiple and customary uses of a standard height table, for example, for luncheons, card and other games, writing, etc. or the multiple and customary uses of a low-height table, for example, as a coffee table, cocktail table, juvenile table, or picnic and beach table.

Another object of my invention is to provide a table with two sets of collapsible legs, each leg operable independently of the other legs, and each set of legs operable independently of the other set of legs, so that the erection of a table of one of two alternative heights can be easily and neatly accomplished, with the set of legs not necessary to support the table at the desired height, remaining hidden from view.

A further object of my invention is to provide a table with two sets of folding legs, one set of legs being shorter than the other, with the corresponding legs of each set at each leg location being economically and efficiently attached to the table top by means of one combined hinge and lock means.

Other objects and advantages of my invention will become apparent from the description of a preferred embodiment of this invention as disclosed in the appended drawings, in which:

Figure 1 is a perspective view of my table on its longer set of legs, which support the table at the standard height for collapsible tables.

Fig. 2 is a perspective view of my table set up on its shorter set of legs, which support the table at a height lower than the standard height for collapsible tables.

Fig. 3 is a fragmentary perspective showing the hinge-lock means for each pair of legs, each pair comprising the long and short leg at each leg location from each set of legs.

Fig. 4 is a fragmentary sectional elevation of the hinge-lock means for a pair of legs, taken along lines 4—4 of Fig. 3.

Fig. 5 is a fragmentary elevation of the hinge-lock means for a pair of legs, taken along lines 5—5 of Fig. 4.

Fig. 6 is a fragmentary sectional elevation of the hinge-lock means for a pair of legs, taken along lines 6—6 of Fig. 4.

Fig. 7 is a fragmentary sectional view of the

2

hinge-lock means of a pair of legs, taken along lines 7—7 of Fig. 5.

Fig. 8 is a bottom plan view of the table showing the disposition of all the legs when both sets of legs are folded flat against the table top.

My table comprises, in general, a table top 1, a set of long legs 2 of standard length for collapsible tables, and a set of short legs 3, of a length less than the standard length for collapsible table legs. Both sets of legs are disposed about the table top in the same manner, such that there is a pair of legs, a long leg 2 and a short leg 3, at each leg location on the table top. Each pair of legs is attached to the under side of the table top by a single hinge-lock means 4 at each leg location.

In the present embodiment, the table top consists of a surface-covering 5 attached to a frame 6. The frame provides a sturdy support on which the hinge-locks 4 are mounted.

Each hinge-lock means 4 comprises a sheet metal bracket 7 enclosed by end plates 8, which support a pivot 9. The legs 2 and 3 are bored at their upper ends, by which means they are mounted on each pivot bolt 9 in pairs, comprising a corresponding long leg 2 and short leg 3 at each leg location. The legs are rounded at their upper ends to facilitate pivoting them when they are mounted close to the frame 6 or the surface-covering 5. The angle through which the legs can be pivoted extends from their position folded flat against the table top, to their position perpendicular to the table top.

Each of the legs 2 and 3 is equipped at its upper end with a shallow notch 10 on each of its sides perpendicular to the axis of the pivot bolt 9. A sloping recess 11 is disposed adjacent the notches 10, thereby completing a channel around three sides of the leg, to receive a yoke 12 fashioned of sheet metal bent into a U-shaped outline. The yoke is provided with a latch 13 and an arm 14, each provided with a countersunk hole to receive a rivet 15 by which said yoke is pivotally attached to the leg. As shown in Fig. 6, the body 16 of the yoke is disposed over, and pivots into, the sloping recess 11. A small coil spring 17 is tension mounted against the yoke body in a shallow hole 18 in the face 19 of the sloping recess. This spring 17 constantly exerts pressure on the yoke body 16, tending to rotate said yoke body out of the sloping recess. The shallow notches 10 on the sides of the leg, are slightly larger than the latch 13 and the arm 14 of the yoke 12, to allow said latch and arm to pivot through a small angle as the yoke body is pivoted

3

either into or away from the sloping recess 11. A slot 20 is provided in the latch 13 to engage the backplate 21 of the bracket 7. The tension of the spring 17 against the yoke body 16 causes the slot 20 in the latch 13 to engage the backplate 21 of the bracket 7 when the sloping end 22 has been slid sufficiently far onto the backplate to line up the slot with said backplate. Recesses 26 are provided in the frame 6, to allow space for the latch to pass the backplate.

The slot 20 is released from engagement with the backplate 21, by pressing on the yoke body 16, against the pressure of the spring. The leg can then be pivoted and folded against the table top.

The yoke body 16 is also provided with a slot 23 disposed near the end of said yoke body, to engage a narrow projection 24 bent down from the bracket 7. When a leg is folded flat against the table top, the projection 24 engages the slot 23, and prevents the leg from pivoting away from the table top. The end 25 of the yoke body near the slot 23 is bent down slightly to facilitate the engagement of the projection 24 and said slot. As the leg is pivoted against the table top, the projection 24 slides up the bent end 24 of the yoke body, against the tension exerted by the spring 17. When the slot 21 coincides with the projection 23, the spring 17 will force the yoke body outward, pushing the slot onto the projection. The leg will remain locked in its folded position until the projection is disengaged from the slot by pressing on the sloping end 22 of the latch 13.

It can be easily seen that my collapsible table permits the quick and easy erection of a table of either a standard height, or of a low height, by extending the appropriate set of legs provided. The legs are equipped with locking means which firmly hold them in either an extended position or a folded position, and are conveniently and economically grouped in pairs on a single hinge lock means, at each leg location.

4

It is also apparent that my invention can be embodied in tables of surface shapes other than square, and numbers of leg locations other than four.

I claim:

A folding table comprising: a table top, two different-length sets of legs hingedly attached to said table top, and a combined hinge-lock means at each leg location to accommodate said legs by pairs comprising one each of the different length legs, said hinge-lock means comprising an enclosed bracket rigidly affixed to the under side of the table top, a pivot bolt supporting the legs between the end plates which enclose the bracket, a yoke attached to each leg over a sloping recess in said leg into which recess said yoke pivots, and a tension mounted spring between said yoke and sloping recess, said yoke being provided with two locking means actuated by said spring, a latch at one end to engage the backplate of the bracket to lock the leg in an extended position, and a slot at the other end of said yoke, to engage a bent projection of the bracket so as to lock the leg in a folded position against the table top, both of said locking means being releasable by compression of the spring.

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