Nov. 17, 1959 A. B. PARK 2,913,295

TABLE HAVING LOCK MEANS FOR TABLE LEG BRACE

Filed May 29, 1958

FIG. 1

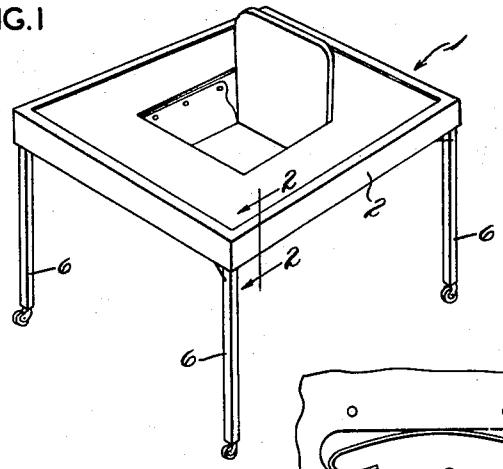
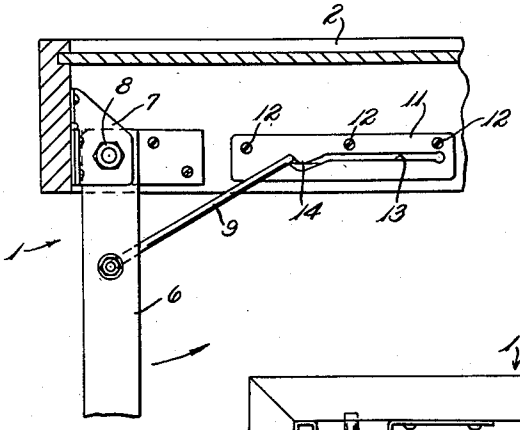


FIG. 2



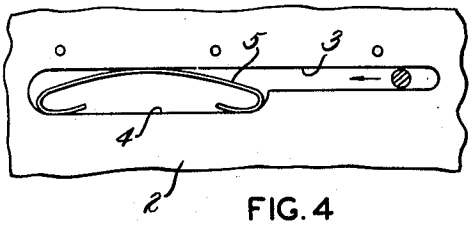


FIG. 4

FIG. 3

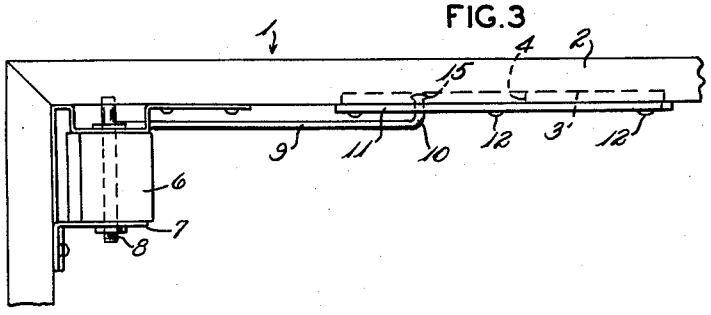
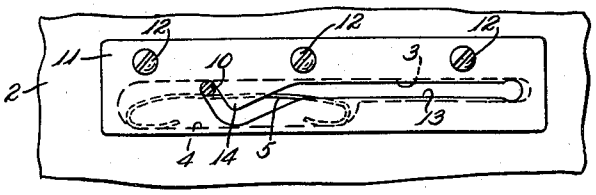


FIG. 5



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TABLE HAVING LOCK MEANS FOR TABLE LEG BRACE

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2 Claims. (Cl. 311—98)

This invention relates to table or leg lock structures, especially to a leg lock adapted to automatically seat in an operative position.

Heretofore there have been many different types of leg locks provided for card tables, infant safety tables, infant feeding tables, and the like. These leg locks have been of a variety of constructions and have, in general, been relatively satisfactory. However, in infant safety tables, or the like, it is particularly important that extremely safe, foolproof structures be designed and used. Thus the parents can be certain that the table in which an infant is seated will never accidentally collapse and the parents can be sure that the parts will remain in operative association with each other over a long period of service use. The tables still must be easily stored and the legs therefor should be readily moved to and from operative positions.

The general object of the invention is to provide a leg lock for a table or safety chair, or the like, and wherein the leg lock includes an anchor plate permanently retaining an end of a leg bracket arm in operative, or inoperative association with a locking recess provided in the table apron, and where a control spring is seated in such locking recess.

Another object of the invention is to position a spring for a leg lock in a retainer slot provided for the spring in the inner surface of a table apron, and to engage the end of a movable lock arm for the table leg with the same slot to have its position therein controlled for leg lock action by the spring received in the slot.

Yet another object of the invention is to provide an improved, relatively uncomplicated table leg lock construction wherein the leg brace is automatically moved to a locked position when the leg is operatively positioned.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

Attention now is particularly directed to the accompanying drawings, wherein:

Fig. 1 is a perspective view of a table having the improved leg lock means of the invention operatively associated therewith;

Fig. 2 is a fragmentary vertical section taken on line 2—2 of Fig. 1;

Fig. 3 is a top plan of the structure shown in Fig. 2 with the table top removed;

Fig. 4 is a fragmentary enlarged side elevation of the spring receiving slot and a section of the leg brace received therein; and

Fig. 5 is a fragmentary elevation, partly in section, of the leg brace and lock means when the leg brace is in its operative position.

When referring to corresponding members shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

The present invention, in general, relates to a table leg lock wherein a table having an apron member thereon is

provided with a substantially horizontally extending slot therein, which slot has an enlarged end, a leg is pivotally secured to the apron member for movement to and from operative positions, a leg brace is pivotally carried by the leg, a leaf spring or similar member is compressed in the enlarged end of the slot and has an open side of the spring facing downwardly, and an anchor plate is secured over the slot, which anchor plate has a slot therein aligned with the slot in the apron and which anchor plate slot has a locking notch therein. An end of the leg brace extends through the plate slot in to the apron slot for control action and engagement with the upper portion of the spring, which spring engages the leg brace end and seats it in a locking notch provided in the anchor plate when the leg is operatively positioned.

Reference now is directed to the details of the structure shown in the accompanying drawings, and a substantially conventional infant safety table is indicated as a whole by the numeral 1 and is referred to hereinafter as a table. It will be realized that any table, such as a card table, or other structure, can be used in the place of the particular table shown herein. In all events, this table 1 has an apron 2 provided thereon, which apron or side portions of the table 1 include a portion therein that has a substantially straight, or horizontally directed slot 3 therein. This slot 3 has an enlarged end or section 4 thereon for receipt of a leaf spring member 5 therein as hereinafter described in more detail.

The table 1 has a plurality of support legs 6 provided therefor and each leg 6 has pivotal engagement with the table apron 2, as by means of a support bracket 7, bolt means 8, and the like. Each of the legs 6 has a leg brace 9 provided therefor and pivotally engages with one end portion of such leg brace. The opposite end of the leg brace is flanged or bent over at 10 to extend towards the portion of the apron 2 having the slot 3 therein. Such end flange 10 of the leg brace 9 obviously must move or slide with relation to the apron 2, as the leg 6 to which the leg brace is pivotally secured, is moved to or from an operative position.

Fig. 3 of the drawings brings out the fact that the end flange or end portion 10 of the leg brace extends into the slot 3 for movement longitudinally thereof.

As an important feature of the invention, a guide, or anchor plate 11 is secured to the table apron 2, as by means of a plurality of screws 12 or the like. This anchor plate 11 has a longitudinally extending slot 13 provided therein, which slot is positioned in general alignment with the slot 3 in the table apron 2. It is important to note that at one end of the slot 13 adjacent the bracket 7 and leg 6, the slot has a substantially V-shaped downwardly and upwardly extending locking notch or recess 14 provided therein. The anchor plate 11 is so positioned in relation to the slot 3 that the end flange 10 or end of the leg brace 9 will extend through the slot 13 and be retained therein by means of an enlarged head, or peened over end 15 on the end flange of the leg brace. Movement of the leg 6 from folded, inoperative position to an extended, operative position will move the end flange 10 the major portion of the length of the slot 3. In such movement, the end flange 10 will be caused to contact the upper, convex surface of the downwardly directed substantially C-shaped leaf spring 5 to be urged by it up towards the upper surface of the slot 3. The leaf spring 5, while of generally C-shape, is made from a spring metal strip of flat shape in cross section. The leaf spring 5 is positioned so that the flat cross sections thereof are parallel to the end 10 of the leg brace. When the leg 6 is operatively positioned, the end flange 10 of the leg brace is moved into the locking recess 14 and is held by load on the leg and by the spring in locked engagement therewith.

Fig. 5 clearly shows how the end flange 10 of the leg brace is engaged with substantially the mid portion of the leaf spring 5 and deflects it to a flattened C-shape when seated in the locking recess 14. By having the enlarged section or end 4 of the slot 3 extend downwardly from the remainder of the slot or recess 3, it is possible to insure that the leg brace will engage slidably with only the top section of the leaf spring. Furthermore, the inwardly curved ends of the leaf spring and the downwardly facing open position of the spring insure that proper sliding engagement will always result between the spring and the leg brace end.

It will be seen that the leaf spring 5 is normally compressed into the enlarged end of the slot and will retain itself in position without special securing means therefor. However, the anchor plate 11 will insure permanently positioning the leaf spring in desired relation to the remainder of the apparatus and provides an inexpensive, but positive positioning of the spring. The leg brace can be readily released from the locking recess 14 by pressure exerted thereon to compress the spring further and permit the end flange 10 of the leg brace to slide down and then up out of the locking recses 14.

Hence, it is believed that an automatically functioning, sturdy leg brace construction has been provided. This construction uses only a minimum number of parts and a very effective and positive leg lock action is secured. Thus, it is believed that the objects of the invention have been achieved.

While one complete embodiment of the invention has been disclosed herein, it will be appreciated that modification of this particular embodiment of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. In a table construction, frame means, a leg, means pivotally securing said leg to said frame means adjacent an inner corner thereof for movement to and from an operative position, said frame means adjacent said leg having a horizontally directed slot in the inner surface thereof and which slot has an elongate vertically enlarged section therein offset downwardly from the longitudinal axis of said slot, a leaf spring compressed into and resiliently self-retained in said enlarged section of said slot and having a continuous curved upper surface bearing on the upper margin of said enlarged section extending the length of said enlarged section but connecting to the lower surface of said slot, a leg brace pivotally carried by said leg, and an anchor plate with an elongate slot therein

secured to said frame means with said elongate slot in register with said frame means slot, said anchor plate slot having a substantially V-shaped vertically extending lock section initially inclined downwardly and then upwardly provided therein and connecting to a straight portion of such slot, said leg brace having an end extending through said plate slot into said frame means slot to engage the upper surface of said leaf spring to be urged into said lock section of said elongate slot by said leaf spring as said leg is moved to operative position, the leg brace end being removable from said lock section by manual depression of said spring by pressure applied to said leg brace.

2. In a table leg lock, a table with an apron member thereon having a substantially horizontal slot therein with a vertically downwardly enlarged elongate end, a leg pivotally secured to said apron member for movement to and from operative position, a leg brace pivotally carried by said leg, a C-shaped leaf spring vertically compressed in and extending only the length of said enlarged end of said slot and having the open side of said spring facing downwardly, said leaf spring resiliently engaging margins of said enlarged slot to be positioned therein, and a guide and anchor plate secured over said slot and aiding in retaining said spring therein, said anchor plate having a slot therein aligned with said apron slot and havng a vertically directed locking notch therein having an initial downwardly inclined section and an upwardly inclined end portion in register with said enlarged end of said slot, an end of said leg brace extending through said plate slot into said apron slot for control action by said spring, the upper surface of said spring at a portion spaced from the ends thereof engaging the end portion of said leg brace end to seat it in said locking notch when said leg is in an operative position whereby said leg brace is releasable from said locking notch only by depressing said leg brace end and moving said leg pivotally inwardly of said table.

References Cited in the file of this patent

UNITED STATES PATENTS

1,235,433	Burrowes	July 31, 1917
1,675,355	King	July 3, 1928
1,770,574	Ironside	July 15, 1930
1,774,364	Gale	Aug. 26, 1930
1,783,556	Bauer	Dec. 2, 1930
1,785,616	Corporon	Dec. 16, 1930
1,933,164	Corporon	Oct. 31, 1933