June 30, 1936. G. H. THACHER ET AL 2,045,931

CARD TABLE

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Fig. 1

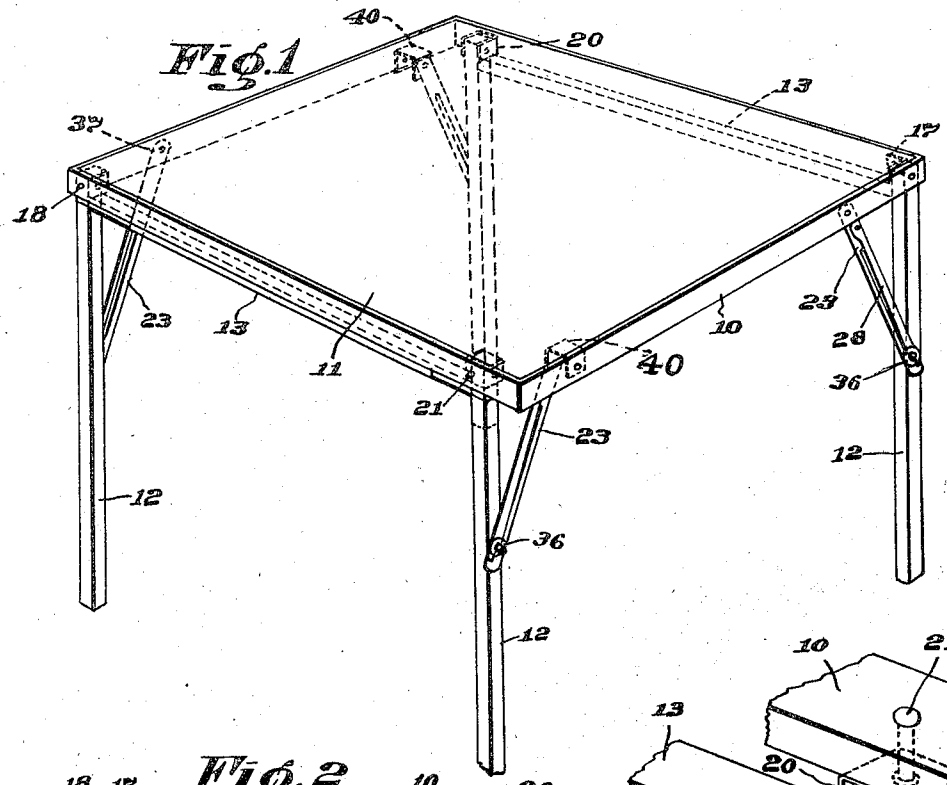
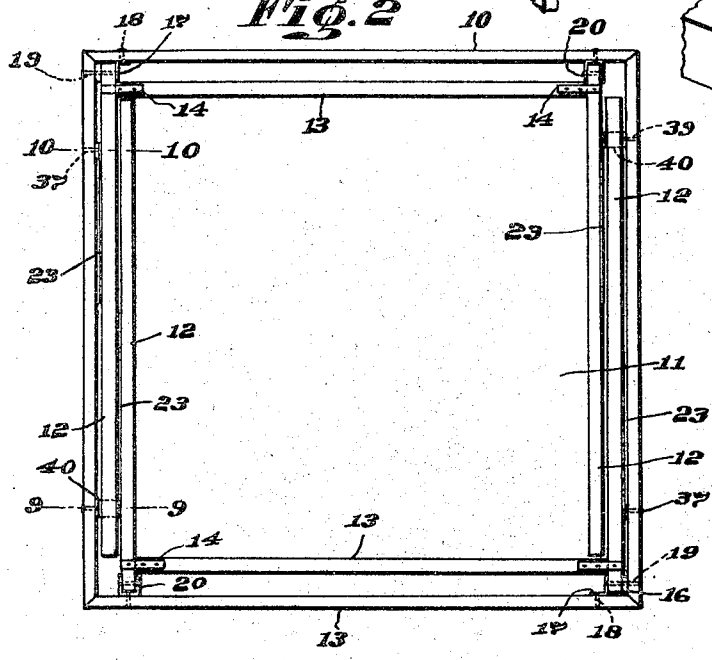


Fig. 2



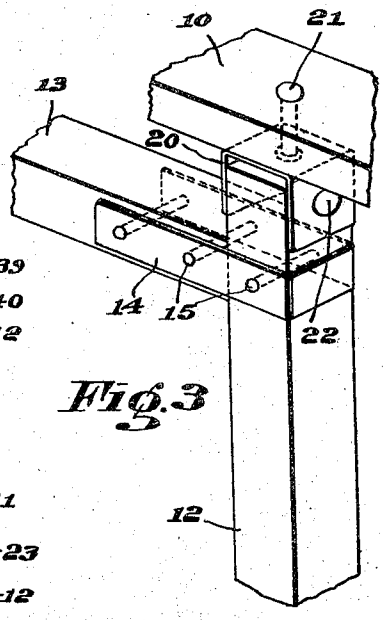


Fig. 3

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Fig. 4

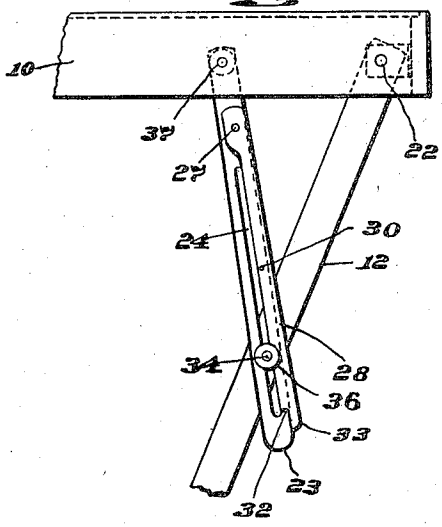


Fig. 5

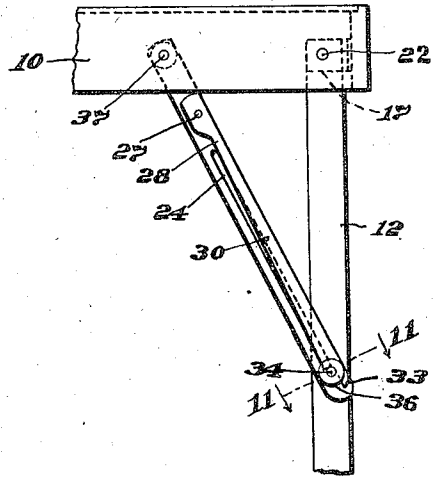


Fig. 6

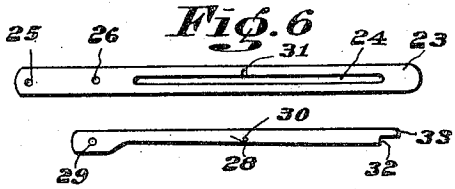


Fig. 7

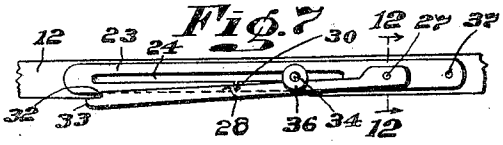


Fig. 8

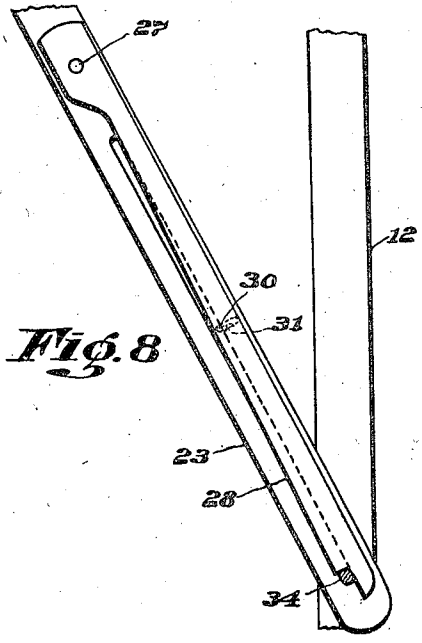


Fig. 9

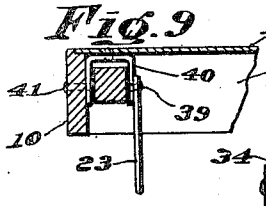
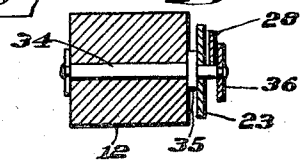


Fig. 11



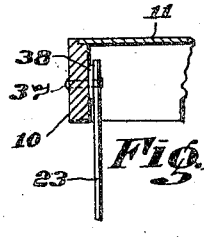


Fig. 10



Fig. 12

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UNITED STATES PATENT OFFICE

2,045,931

CARD TABLE

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Application July 18, 1934, Serial No. 735,766

6 Claims. (Cl. 311—86)

This invention relates to card tables and other types of tables having folding legs, and more particularly to a construction whereby the legs of the table may be quickly moved to either their folded position or table supporting position.

Card tables as commonly constructed have a square, hollow frame to which a top of thin stiff material is secured, and in the cheaper tables the top is formed of "beaver-board" or other thin sheet material, while in the more expensive tables the top is formed of thin wood reinforced by strips secured to the under face of the top. When the table top is formed of thin fibrous material such as "beaver-board" the legs must be pivotally mounted upon the frame alone, since it is not practical to secure the leg supporting means to such thin fibrous top.

It is therefore usual in the construction in which the legs of the table are supported from the frame alone to pivotally mount the legs so that one leg will fold alongside each of the four sides of the table frame, but when this leg construction is employed it is necessary to turn the table around to several different positions in order to conveniently grasp the different legs and move them to or from the folded position.

The present invention relates to a simple and cheap card table construction in which the legs are connected in pairs so that all four legs may be quickly and easily moved to either the folded position or table supporting position without the necessity of turning the table around and grasping each leg.

An extremely important feature of the present invention resides in gravity controlled means for locking the legs in the table supporting position, and which is so constructed that the locking means will move by gravity into the leg locking position as the table is set up ready for playing and the locking means will move by gravity to the leg releasing position as the table is turned over preparatory to folding the legs.

Another feautre of the invention resides in a strong but simple construction for rigidly connecting the legs to operate in pairs, and for pivotally securing the pairs of connected legs to the table frame for movement to and from a folded position within the top structure.

Other features of the invention and novel combination of parts in addition to the above will be hereinafter described in connection with the accompanying drawings which illustrate one good practical form of the invention.

In the drawings:

Fig. 1 is a perspective view of a card table embodying the features of the present invention.

Fig. 2 is a plan view of the under face of the table showing the legs folded.

Fig. 3 on a larger scale is a perspective view of the pivotal support and connecting bar for one of the legs.

Fig. 4 is a side elevation of a portion of the table showing a leg in an inclined position.

Fig. 5 is a similar view showing the leg locked in the table supporting position.

Fig. 6 is a plan view of an inclined brace and cooperating locking latch.

Fig. 7 is a face view showing the position of an inclined brace and gravity latch when a leg is in its folded position.

Fig. 8 on a larger scale shows how the inclined brace and gravity latch lock a leg in the table supporting position.

Fig. 9 is an enlarged sectional view taken on line 9—9 of Fig. 2.

Fig. 10 is a sectional view taken on line 10—10 of Fig. 2.

Fig. 11 is a sectional view taken on line 11—11 of Fig. 5; and

Fig. 12 is a sectional view taken on line 12—12 of Fig. 7.

The gravity controlled latch of the present invention for locking the legs of a table in the table supporting position may be employed upon various types of tables and is particularly well adapted for use upon tables having the legs connected to operate in pairs, but may also be employed upon tables of the type in which each leg folds independently of the other legs.

The leg supporting and locking mechanism contemplated by the present invention has been designed more particularly for use upon the cheaper type of card table in which the top structure consists of a hollow frame having a top formed of "beaver-board" or other fabricated sheet material secured thereto. The construction is therefore such that the legs and the leg locking means are supported entirely from the side pieces of the frame independently of the sheet forming the table top, but the invention obviously may be used in the more expensive types of table in which the top is strong enough to support the leg braces.

The top structure illustrated comprises a hollow frame formed of the four side strips 10 having their ends secured together to form the frame, and to this frame is secured in any preferred manner the table top 11. The construc-

tion of the top structure is not a part of the present invention.

The legs 12 of the table are in accordance with the present invention rigidly connected to operate in pairs so that they may be easily and quickly moved to and from the folded position, and a simple and strong construction for rigidly connecting a pair of legs 12 comprises a transverse bar 13 spaced inwardly from the pivoted ends of the legs just sufficient to clear the leg pivotal supporting means. The ends of the bar 13 may be rigidly connected to the legs by the U-shaped straps 14 which fit snugly around a leg and extend along the bar 13 a short distance as shown and the strap is secured to the leg and bar by rivets 15.

Since the bar 13 is spaced a short distance from the pivoted ends of the legs it does not interfere with the means for pivotally supporting the legs, and furthermore it cooperates with the pivoted supporting means to form a two-point support for holding the connected legs in parallel relation to each other, in the plane defined by the connected legs and bar.

The legs are pivotally secured to two of the four side pieces 10 of the table for folding movement toward each other into the top structure, and one leg of a pair of connected legs lies close to a wall 10 while the other leg of that pair is spaced inwardly from a side wall sufficiently to clear a folded leg of the other pair, as will be apparent from Fig. 2. It will therefore be seen that two of the four legs lie close to the side walls 10 and two legs lie in spaced relation to these side walls.

The two legs that lie close to the side walls are spaced slightly therefrom by providing the washers or the like 16 between these legs and side walls so as to space the legs from the walls enough to clear the inclined locking braces to be described.

The legs are pivotally supported in the construction shown by fastening an angle bracket 17 to a wall 10 by a rivet 18, and the leg is pivotally secured between the washer 16 and bracket 17 by a pivot pin 19 which may extend inwardly through the wall 10 and have its end riveted against the bracket 17.

The legs which are spaced inwardly some distance from the side walls 10 may be pivotally supported by a U-shaped bracket 20 secured to a wall 10 by the rivet 21 and the leg is pivotally secured between the spaced walls of the bracket 20 by the pivot pin 22.

The mechanism so far described serves to pivotally secure the pairs of connected legs to the frame 10 for folding movement into the frame, and the means of the present invention for locking the legs in the table supporting position and constructed so that the table is easy to set up ready for use and folded up when not needed will now be described.

The leg locking means of the present invention comprises four inclined braces 23, one for each leg. All four braces may be identical in construction and as shown each brace has an elongated slot 24, a pivot hole 25 and a second pivot hole 26. Upon each brace 23 is pivotally mounted at 26 by means of a pivot pin 27 a gravity operated latch 28. The gravity latch preferably has the configuration best shown in Fig. 6 and is provided near one end with the hole 29 that receives the pivot pin 27. The latch is partly cut away along one edge to clear a pin traveling along the slot 24 and the swinging movement of the latch 28 away from the slot 24 may be limited by a stop pin 30 projecting from one face of the latch 28 and entering a recess 31 in an inner wall of the brace 23. The latch 28 is provided at its end remote from its pivot with a shoulder 32 and projecting end 33. The shoulder is adapted to extend across the slot 24 when the table leg is in the table supporting position so as to hold the leg supporting pin 34 at the outer end of the slot 24 to thereby prevent movement of this pin along the slot. The pin 34 preferably has the construction best shown in Fig. 11 in which a shoulder 35 rests against one face of the leg and spaces the brace 23 slightly from this leg and the brace 23 and latch 28 are loosely confined between the shoulder 35 and washer 36 riveted to the outer end of the bolt 34.

Two of the inclined braces 23 are secured at one end to a wall 10 by a rivet 37 extending through the hole 25 as best shown in Fig. 10 and a washer 38 is provided between the brace and table wall. The other two inclined braces lie between a pair of folded legs and their pivoted ends therefore need to be supported inwardly beyond a folded leg. This is accomplished by pivotally securing by rivets 39 the ends of these two braces having the holes 25 to the U-shaped brackets 40. These brackets as best shown in Fig. 9 are shaped so that a folded leg 12 may lie in the space between the walls of the bracket and the bracket is secured to a wall 10 by a rivet 41.

The gravity latch 28 is so mounted upon the inclined brace 23 that it will swing freely thereupon to and from its leg locking position of Fig. 8, and as a result when the table is set up ready for use as shown in Fig. 1, these latches will move under the influence of gravity to the leg locking position. On the other hand, if the table is turned over preparatory to folding the legs, the action of gravity will be in a direction to move the latches to their leg releasing position of Fig. 7 so that the legs may be readily folded without the necessity of manually releasing the latches.

As a result of the foregoing all four legs of the table may be moved to their folded position or to their projected position at right angles to the table from any one of the four sides of the table without the necessity of turning the table around to reach the legs or release the locking means. If the table should be turned over with the legs up preparatory to folding the legs so that one edge of the table rests upon the floor and the top 11 forms an acute angle with the floor, all four latches will move by gravity to the unlocked position provided either side strip 10 to which the legs are not secured rests upon the floor. If however one of the side strips 10 to which a pair of legs is pivotally secured rests upon the floor then the latches for this pair of legs will move by gravity to the leg releasing position but the other pair of latches now at the upper edge of the table will not release by gravity. However since these upper latches are in a readily accessible position at this time they may be easily released by hand and the legs folded.

It will be seen from the foregoing that the mechanism of the present invention retains the legs rigidly in the table supporting position, and as a result of the gravity controlled latches the mere act of moving the legs to their open position and setting the table up ready for use causes the latches to move to their leg locking position, while

the operation of turning the table over preparatory to folding the legs causes the latches to move to the leg releasing position.

We claim:—

1. In a card table in combination, a top structure, legs pivotally secured thereto to fold within the top structure, inclined braces pivotally secured to the top structure for retaining the legs in the table supporting position, and gravity operable latches mounted upon said braces and adapted to be moved by gravity into a leg locking position as the table is set up ready for use and to be moved by gravity to the leg releasing position as the table is turned over preparatory to folding the legs.

2. In a card table in combination, a top structure, legs pivotally secured thereto to fold within the top structure, inclined braces for retaining the legs in the table supporting position, and gravity operable latches pivotally mounted on the braces and adapted to be moved by gravity into a leg locking position as the table is set up ready for use and to be moved by gravity to the leg releasing position as the table is turned over preparatory to folding the legs.

3. In a card table in combination, a top structure, leg pivotally secured thereto and each having a brace engaging pin, inclined braces for retaining the legs in the table supporting position and each provided with a long pin receiving slot in which said pin secured to a leg may slide along the brace as the leg is moved to its folded position, and a gravity operable latch mounted upon each brace adjacent said slot and adapted to co-operate with said pin to lock the leg in the table supporting position and to be moved by gravity out of locking relation with the pin as the table is turned over preparatory to folding the legs.

4. In a folding table in combination, a top structure, legs pivotally secured thereto for folding movement, inclined braces for retaining the legs in the table supporting position, a gravity operable latch pivotally mounted upon each brace and adapted to be moved by gravity into a leg locking position as the table is set up ready for use and to be moved by gravity to the leg releasing position as the table is turned over preparatory to folding the legs, and stop means for limiting the pivoted movement of said latch.

5. In a card table in combination, a top structure including a four sided hollow frame, legs pivotally secured to said frame for folding movement, an inclined brace for each leg pivotally supported from said frame and slidably connected to the leg, and a gravity operable locking member associated with each brace for movement into position to prevent relative sliding movement between the brace and leg and adapted to be moved by gravity into a leg locking position as the table is set up ready for use and to be moved by gravity to the leg releasing position as the table is turned over preparatory to folding the legs.

6. A card table comprising in combination, a top structure including a four sided hollow frame, legs pivotally secured to the frame for folding movement, transverse bars rigidly connecting the legs to operate in pairs, an inclined brace for each leg pivotally supported from the frame and slidably connected to the leg, and a gravity operable locking member associated with each brace and operable to lock the legs in the table supporting position as the table is set up ready for use and to release the legs as the table is turned over, whereby all four legs can be operated from adjacent one side edge of the table to open the legs and lock them in the open position and unlock and fold the legs.

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