July 24, 1956 D. H. HAYDEN 2,756,118

TABLE WITH FOLDING LEGS RIGIDLY HELD EXTENDED

Filed Nov. 6, 1953

Fig. 1.

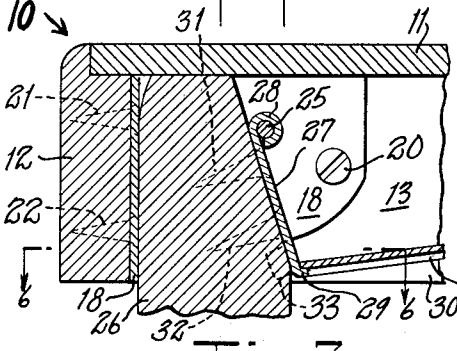

Fig. 2.

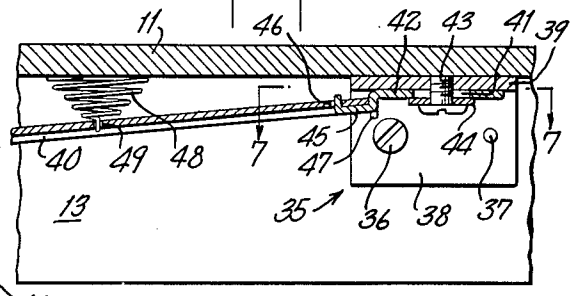

Fig. 3.

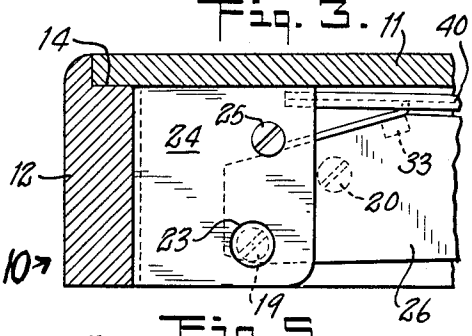

Fig. 4.

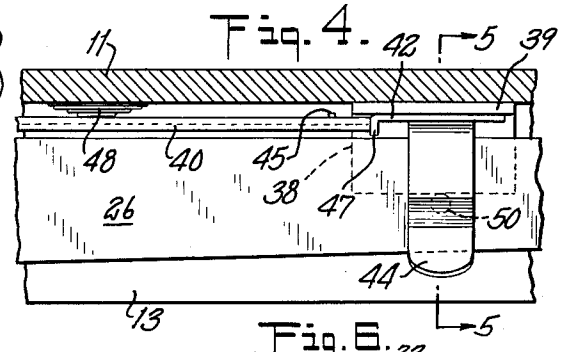

Fig. 5.

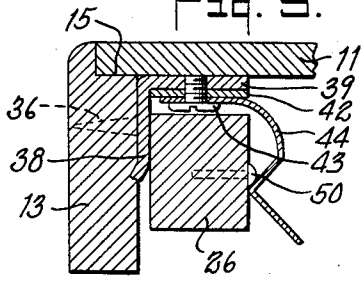

Fig. 6.

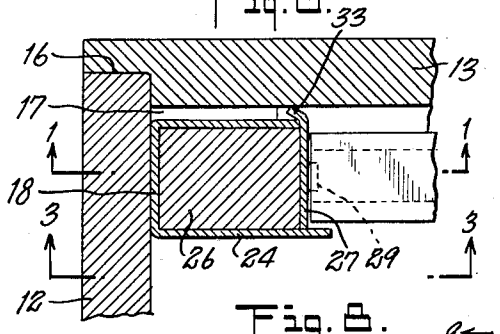

Fig. 7.

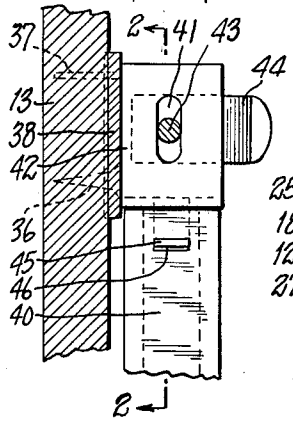

Fig. 8.

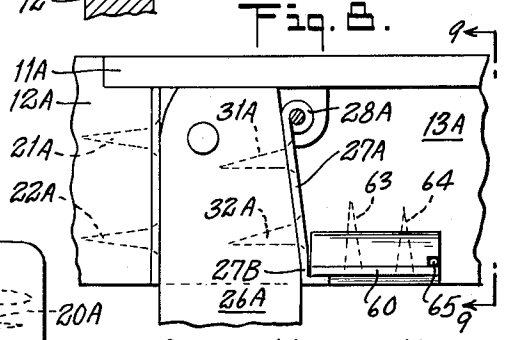

Fig. 9.

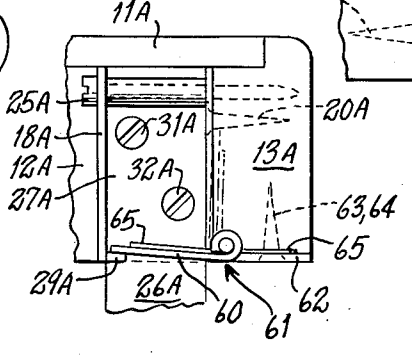

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TABLE WITH FOLDING LEGS RIGIDLY HELD EXTENDED

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5 Claims. (Cl. 311—87)

The present invention relates to card tables and refers more particularly to the construction of that part of a table having folding legs concerned with keeping the leg in firmly vertical, supporting position when open and retaining the leg neatly out of the way when folded.

An object of the present invention is to provide a table in which the leg bracing means shall not extend below the level of the table frame or apron.

Another object is that the brace shall have maximum rigidity.

A further object is that the brace shall be adjustable longitudinally.

Another and further object is to provide a table which can be built complete except for the top member, as the top member is frequenly furnished as an article of commerce to the table manufacturer.

Still another object is to provide a table in which the metal fittings constituting pivotal mounts for the legs shall be reinforcements connecting together the frame side members.

In accomplishing the objects of the present invention, a substantially U or channel shaped bracket is used at each corner of the table, one arm of the bracket being attached to the inside surface of one side member of the frame, and the bight of the U being attached to the inside surface of the adjacent side member. The hinge pin of the leg passes through both arms of the bracket and into the first mentioned side member. A hinge plate is attached to the leg and comprises a knuckle surrounding the hinge pin and a projection substantially at the height of the bottom boundary of the frame side members.

Approximately midway the length of the side member, an L-shaped bracket is attached to the inside surface of the side member, the free standing portion of this bracket being in the plane of the bottom surface of the top member and thus supporting the latter. A screw engaging the free standing portion from underneath mounts an elongated rigid brace extending therefrom to the hinge plate of the leg and firmly abutting the latter to prevent folding of the leg. The brace is urged downwardly against the projection of the hinge plate by a coil spring, and has freedom for upward pivotal motion against the spring to permit the leg to be folded. Also mounted on the screw in the free standing portion of the L bracket is a leaf spring frictionally engaging the folded leg to maintain the same in folded position.

Alternative brace means are provided in the form of a spring hinge, one strap thereof being affixed to the under or inside surface of the frame side member and the pin being parallel to the side member. The free strap is urged by the spring into engagement with the projection of the hinge plate of the leg, abutting the same to hold the leg in supporting position.

The invention accordingly consists in the features of construction, combinations of elements and arrangements of parts which will be exemplified in the constructions hereinafter described. In the accompanying drawings,

in which are shown two of the various possible illustrative embodiments of this invention:

Figure 1 is a fragmentary vertical section of a corner of the table, on the line 1—1 of Figure 6.

Figure 2 is a fragmentary vertical section of the table through the screw of the L-shaped bracket, on the line 2—2 of Figure 7.

Figure 3 is a fragmentary vertical section of the same corner of the table, on the line 3—3 of Figure 6, but showing the leg in folded position.

Figure 4 is a fragmentary vertical section on the same plane, also showing the leg folded and retained by the leaf spring of the L shaped bracket.

Figure 5 is a fragmentary section on the line 5—5 of Figure 4.

Figure 6 is a fragmentary section on the line 6—6 of Figure 1.

Figure 7 is a fragmentary section on the line 7—7 of Figure 2.

Figure 8 is a fragmentary section corresponding to Figure 1 and showing an alternative brace construction.

Figure 9 is a fragmentary section on the line 9—9 of Figure 8.

Referring now in detail to the drawings, my improved card table 10 has a top member 11. Some manufacturers make card table tops exclusively and an advantage of the present table is that it can be manufactured complete except for the top, which can then be attached as the last step in the manufacture of the table, allowing the table manufacturer greater flexibility in the filling of orders for tables specifying various types and finishes of top member 11.

Four side frame members such as 12, 13 are connected together to form a square frame in which the width of the members 12, 13 is the depth of the frame and the thickness of the members is their horizontal dimension when the table is in use. The top surfaces of the side members are ploughed as illustrated at 14 and 15 for setting top member 11 in flush, and conventional corner construction includes the glued joint 16 and block 17.

A substantially rectangular U or channel shaped bracket 18 is attached to the inside surface of frame side member 13 by the screws 19, 20 and to the inside surface of frame side member 12 by the screws 21, 22, thus connecting the members 12, 13, together by means independent of and reinforcing the glued joint 16. Screw 19 is driven by a tool inserted through the access hole 23 in the free standing arm 24 of the bracket 18.

Screw 25 passes through holes in both arms of bracket 18 and perpendicularly into side member 13 and constitutes the pivot pin of leg 26. Hinge plate 27 comprises integrally the substantially cylindrical knuckle 28 encompassing pin 25 and further comprises integrally the projection 29 substantially at the level of the lower boundary 30 of the member 13. Screws 31, 32 fasten the hinge plate 27 and leg 26 together. Hinge plate 27 further comprises the integral projecting finger 33 extending past the attached arm of bracket 18 on the side of the hinge plate 27 toward the side member 13.

The L-shaped bracket 35 is mounted by screw 36 and pin 37 with its plate 38 in parallel contact with member 13 and substantially midway the length of member 13, the plate 39 of bracket 35 being in parallel contact with top member 11 and constituting a support therefor.

The elongated rigid brace 40 is formed of sheet metal flanged over on both side boundaries. Brace 40 has the longitudinally extending slot 41 formed in its separate but pivotally connected inner end portion 42, the latter being mounted on the under surface of plate 39 by the screw 43 passing through slot 41 and threaded into plate 39. The leaf spring 44 is also mounted to plate 39, below portion 42, by the screw 43.

The pivotal connection of portion 42 to the major portion of brace 40 is by means of the depending finger 45 integral with portion 42 and extending downwardly for a distance equal to the thickness of the material of the brace, thence outwardly and thence upwardly through the hole 46. Shorter fingers 47 of portion 42 merely extend downwardly to provide an abutting surface against which the brace may thrust.

A weak conical spiral compression spring 48 is located above brace 40 and has its point located in a hole 49 in the brace, urging the brace downwardly against the projection 29 as in Figures 1 and 6. A round headed nail 50 is driven into leg 26 from the inside surface thereof and its head is engaged by a knee of leaf spring 44 as in Figure 5 when the leg is folded.

In operation, the leg 26 is held in vertical, supporting position by the abutment of brace 40 against the plate 27 and urged downward on projection 29 by spring 48. Leg 26 also abuts the bight of the bracket 18 and the finger 33 also abuts the bracket 18 as shown in Figure 6. Brace 40 may be swung upwardly to the position of Figures 3 and 4 to permit the leg to fold parallel to top member 11 and side member 13, and in this position the leaf spring 44 resiliently engages the nail head 50 and frictionally engages the leg 26, each such function serving to maintain the leg in folded position.

Alternative spring actuated abutting brace means for keeping the leg 26A in vertical supporting position are illustrated in Figures 8 and 9.

The U-shaped bracket 18A is fixed to side members 12A and 13A by screws 20A, 21A, 22A and hinge pin screw 25A. Hinge plate 27A with finger 29A integral and projecting therefrom and knuckle 28A integral therewith is attached to leg 26 by the screws 31A, 32A. The lower portion 27B of plate 27A is substantially vertical in the supporting position of leg 26A and is abutted by the plate 60 of leaf hinge 61, the plate 62 of hinge 61 being screwed to the underside of member 13A by screws 63, 64. A torsion coil spring 65 is part of hinge 61 and causes the same to assume the extended coplanar position of its leaves illustrated in Figure 9. In this position of hinge 61 the leg 26A is firmly maintained vertical by the abutment of leaf or brace 60 against the portion 27B of hinge plate 27A. Plate 60 may be manually pressed upwardly to the position shown in dotted lines in Figure 9, to permit folding of the leg. In this construction the pin and knuckle of the pivot of the brace means, namely hinge 61, is parallel to the leg in folded position.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use. As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. In a table frame of the type having side frame members to which a top may be secured, and legs adapted to extend downward in use or be folded within said frame members, said legs when extending downward being without any brace projecting substantially below said frame members, a channel shaped bracket for each leg secured to two of said frame members, each leg being pivotally secured between the sides of its bracket, a brace for holding each leg in its downwardly extending position, and means for retaining each leg when folded within said frame members, the combination therewith of the improvement for enhancing rigidity of each leg in its downwardly extended position substantially abutting the bight of its bracket, said improvement including said brace being of substantially rigid metal and comprising an end portion secured to a frame member and a longer portion cooperating with a leg and pivotally mounted with respect to said end portion, said end portion being provided with means securing it to a frame member and means whereby said end portion may be adjusted longitudinally of said frame member to shift said longer portion longitudinally.

2. A table frame according to claim 1 in which said leg engaging portion of said brace contacts a leg across at least a major portion of the leg width at its place of contact, substantially centrally of said leg width, and said leg engaging and longer portion of said brace being provided with at least one longitudinal stiffening flange.

3. A table rectangular frame including side frame members, with legs adapted to be folded within said frame when not in use, a channel shaped bracket having two of its sides secured to frame members at each corner within said frame, a leg pivotally mounted between the sides of each channel bracket, a pivot pin for each leg supported in each side of each channel bracket, the base of each channel bracket constituting an abutment against which a leg is held while in use in its downwardly extending position, a brace engaging an opposite side of each leg from said abutment in its downwardly extending position, an upper portion of the side of each leg engaged by said brace sloping inwardly above the place engaged by said brace, a metal plate secured to such inwardly sloping leg portion, an upper end of said plate forming a generally cylindrical knuckle around said pivot pin adjacent a longitudinal axis of its leg, a lower end of said plate forming an outwardly extending projection engaged beneath said brace when the leg extends downward.

4. A table frame according to claim 3 in which said plate has a lateral projection toward its nearest side frame member, beyond an adjacent side of said channel shaped bracket and extending away from plate and toward said adjacent side of said channel shaped bracket.

5. In a card table frame having folding legs and side frame members rigidly connected together, the improvement enhancing rigidity comprising a substantially rectangular U-shaped bracket mounted on adjacent portions of two of said side members thereby connecting the latter, a pivot pin extending through both arms of said bracket and into one of said side members perpendicularly thereto, a table leg pivotally mounted on said pin for swinging from a substantially vertical supporting position to a folded position substantially parallel to said last mentioned side member, an L-shaped brace mounting metal bracket firmly mounted on said last mentioned side member spaced from the first mentioned bracket, one portion of said L-shaped bracket being in parallel contact with said side member and the other portion thereof being parallel and adjacent a table top when mounted on said frame, a rigid metal brace mounted for adjustment longitudinally thereof on said last mentioned portion and for pivotal motion from a position substantially parallel to a table top to a lower position where the free end of said brace is adjacent the lowermost boundary of said side members, said leg having a plate secured thereto with a projection extending toward and below said brace when said leg is vertical and said brace in said lower position having an end firmly abutting said leg plate and maintaining the leg in said vertical position with said abutting brace end extending across at least a major portion of the width of the contiguous side of said leg and in substantial alinement therewith, and a spring urging said brace into said lower position and against said projection, said brace being formed with a longitudinally extending slot in an end portion and being adjustably fastened to said brace mounting bracket by a screw passing through said slot, said brace engaging substantially a full width of said leg.

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