April 25, 1933. F. B. HARMAN 1,905,862

FOLDING CARD OR LIKE TABLE

Filed July 19, 1929 2 Sheets-Sheet 1

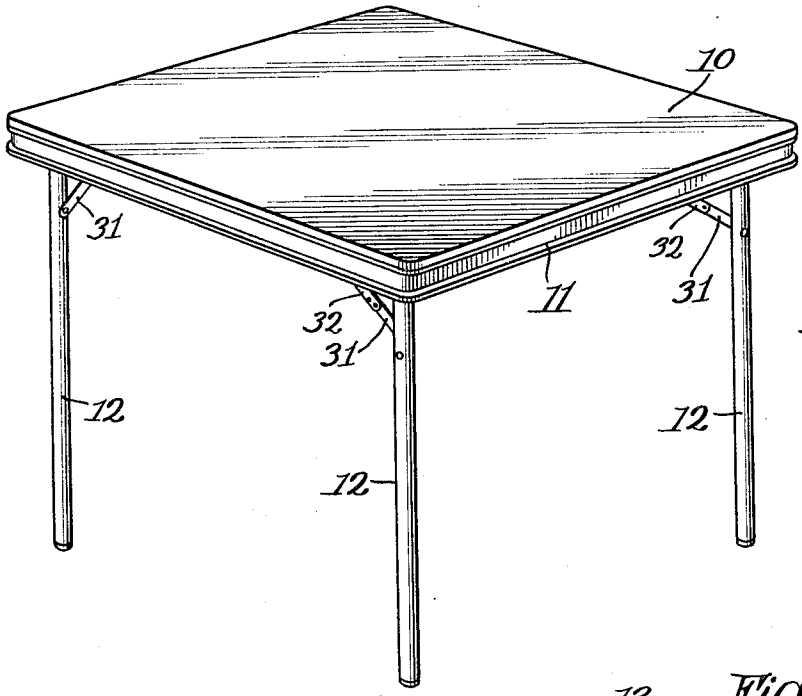


Fig. 1

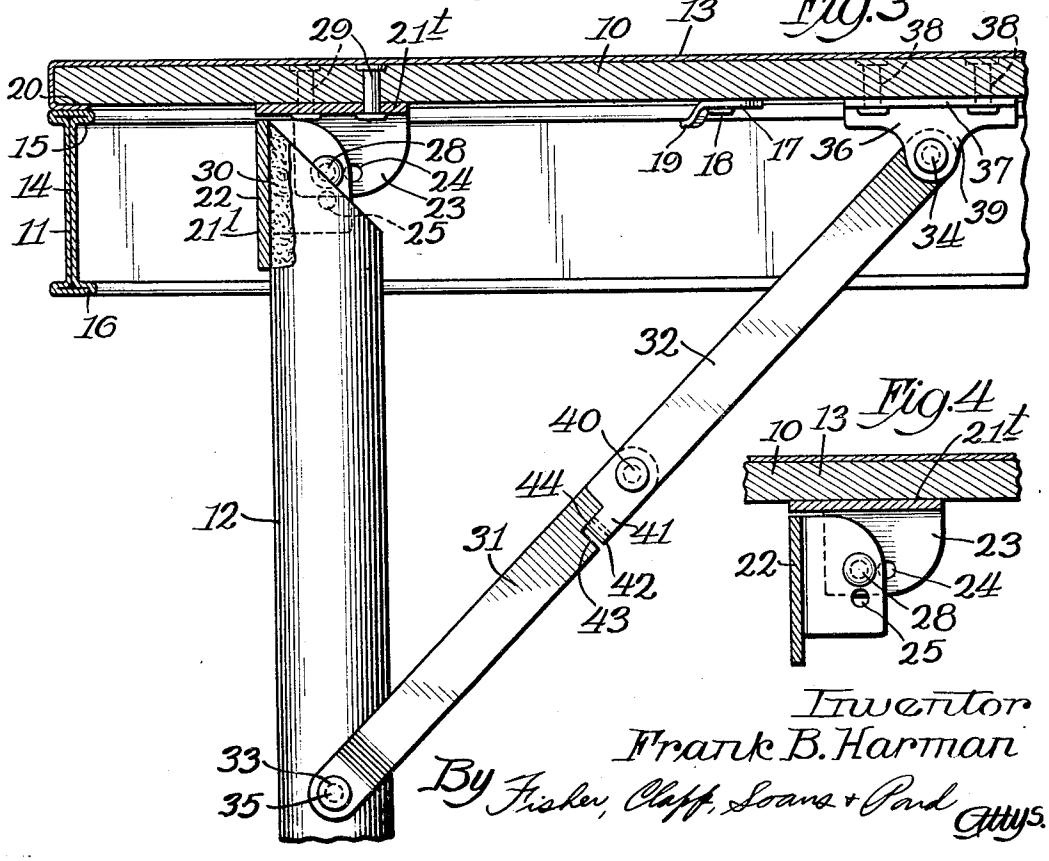


Fig. 3

Fig. 4

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Fig. 2

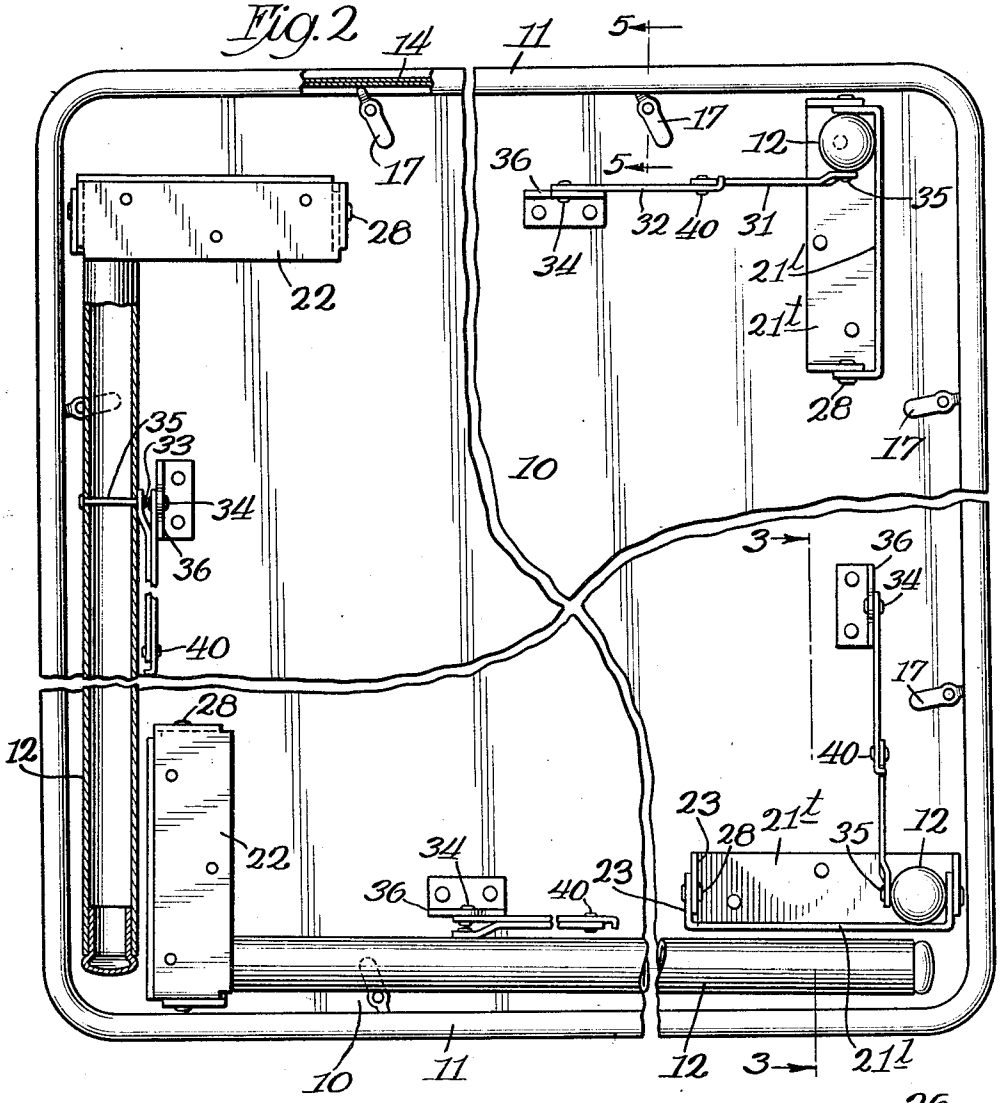


Fig. 5

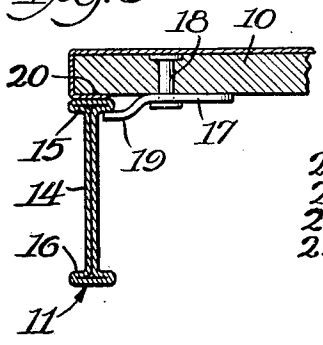
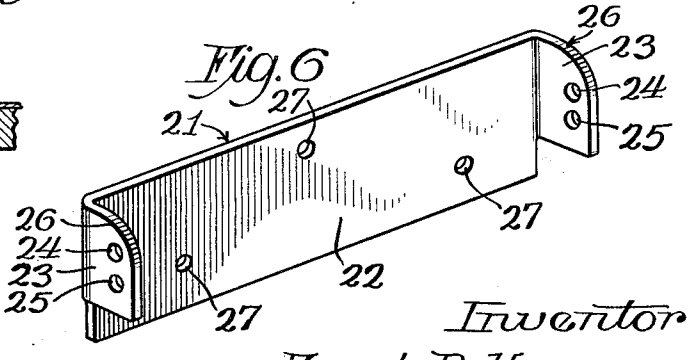


Fig. 6



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UNITED STATES PATENT OFFICE

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FOLDING CARD OR LIKE TABLE

Application filed July 19, 1929. Serial No. 379,337.

This invention relates to folding card or like tables and has for its main object the provision of a strong and rigid table of the type referred to, which can be manufactured economically and at a comparatively low cost.

Other objects and advantages of the invention will be understood by reference to the following specification and accompanying two sheets of drawings, in which I have illustrated a folding card table embodying a preferred form of my invention.

In the drawings:

Fig. 1 is a perspective showing the table set up for use.

Fig. 2 is a bottom plan showing the arrangement of the legs.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a detailed illustration of certain parts appearing in Fig. 3.

Fig. 5 is a section on the line 5—5 of Fig. 2, and

Fig. 6 is a perspective of a bracket element constituting a hinge part.

Referring now to the drawings, my improved card table includes a top 10 having a depending marginal frame 11 and folding legs 12. The top 10 may be of any suitable construction such as paper board, fibre board or laminated wood, and is preferably covered with a suitable leather, fabric or like covering 13, the covering 13 being wrapped around the edges of the top substantially as shown in Fig. 3, and secured by cement, tacking or in any other desirable manner.

The marginal frame 11 is preferably a metal frame in the shape of an I-beam as clearly shown in Fig. 3. This structure affords great rigidity and lends pleasing appearance to the table structure. The I-beam frame element may conveniently and cheaply be formed by collapsing a metal tube so as to provide the intermediate double walled web portion 14 and double walled upper and lower flanges 15 and 16 respectively.

The table top part 10 may be detachably or permanently secured to the marginal frame 11 as desired, but I prefer to provide means for detachably mounting the top. One of such means is shown in detail in Fig. 5 and consists of a clip or clamping member 17 which is pivoted on the under side of the top by means of a rivet 18. The clamping member 17 is provided with a downwardly offset end portion 19 which is adapted to fit under the upper flange 15 of the marginal frame, preferably in tight engagement therewith so as to rigidly hold the table top in place on the frame. It will be seen that the top 10 may be detached from the frame merely by swinging the clip member 17 on its pivot so as to disengage the end portions 19 thereof from the flange 15. It will also be noted because of the slight bevel or angle of the inside face of the flange members 15 and 16 which is incidental to the manufacture of frame members such as described, the clip member 17 will be more or less wedged into tight fitting engagement when the clip member is swung on its pivot so that the end portion 19 thereof approaches the intermediate web of the frame member. Because of this clamping arrangement, it is not necessary that the covering sheet 13 be tacked or secured to the top since the same may be held in place by having its marginal portion 20 clamped between the bottom faces of the top, and the top of the frame flange 15. Thus, replacement of the top covering is facilitated.

The legs 12 may be of any suitable construction, but I prefer to use tubular metal members as shown, and these legs are pivoted to the table top by means of a hinge structure which I have found to be easy and inexpensive to make. This hinge structure is best shown in Figs. 2, 3, 4 and 6, and preferably includes a pair of like or substantially like hinge or bracket members 21 (Fig. 6) having a main, elongated plate part 22 of substantial width, and provided with ears 23

at its opposite ends. The ears 23 extend laterally from the main plate part 22, and are of reduced width relative to the width of the main plate part so that a longitudinally extending marginal portion of the plate part projects beyond the ears as clearly shown. The ears 23 are each provided with a pair of spaced apertures 24 and 25, and one corner of each of the ears is rounded off as indicated at 26. The plate part 22 is provided with apertures 27—27.

Each hinge comprises two bracket members such as above described, the same being pivoted together by means of pivot pins or rivets 28 extending through the apertures in the ears. One of the hinge members 21^t is secured to the top 10 by means of rivets 29 which extend through the apertures 27 in the plate part of the hinge member. The other hinge member 21^l is secured to the leg 12 in any suitable manner, preferably by welding as indicated at 30, the welding preferably extending across the entire width of the plate part of the hinge member so that the leg is rigidly united to the hinge part. The substantial width of the plate part 22 obviously serves to afford sufficient area lengthwise of the leg to facilitate the making of a strong bond between the leg and hinge member, and also to permit transversely spaced points of attachment between the plate part and table top so that the top mounted hinge member will be securely attached to the top.

If desired, the arrangement may be such that when the leg is in extended position, the edge of the projecting marginal portion of one of the plate parts abuts against the face of the projecting marginal portion of the other hinge member to limit unfolding movement of the leg. However, in the present instance, I do not depend upon such engagement for this purpose, other means being preferably employed as will hereinafter be described.

In order to permit two like members of material width, preferably greater than the average cross sectional dimension of the legs, to be used in forming hinges, and also to permit the legs to be folded to a position closely adjacent the underside of the top, the ears 23 of the hinge members are provided with the two apertures 24 and 25 as above described. One of the apertures, 25 is adapted for use when the hinge member is secured to the table top, and the other aperture, 24, is adapted for use when the hinge member is secured to the leg. This arrangement obviously permits the leg to be folded to a position closely adjacent the bottom of the table top and entirely within the width of the marginal frame 11. The ears at the ends of the elongated plate part 22 of each hinge member, being spaced a substantial distance apart, serve to prevent material wavering of the leg in the direction of the pivot axis even though there be some looseness in the pivotal connections between the hinge members.

For bracing the legs when in extended position, I provide brace means for each leg which consists of a pair of link members 31 and 32 which are respectively pivotally connected at one end to the leg and table top as indicated at 33 and 34. The pivotal connection 33 between the link 31 and leg 12 may conveniently be formed by means of a rivet member 35 extending through the leg as clearly shown in Fig. 2, and the pivotal connection 34 between the link 32 and table top may be made by means of a bracket element 36 which includes a flange part 37 anchored to the table top by means of rivets 38 and ear part 39, to which the end of the link 32 is pivotally connected by means of a rivet or the like. The other ends of the respective links are pivoted together by means of a rivet as indicated at 40. One of the links, in this instance, the link 32 is provided with an end portion 41 extending beyond the pivotal connection 40 and overlapping the adjacent end portion of the link 31. The extension 41 is provided with a portion 42 of reduced width relative to the width of the link, bent at substantially right angles to the plane of the link, and fitting into a notch 43 provided in the lower edge of the link 31. The bent end portion 42 serves to engage the bottom 44 of the recess 43 so as to limit relative pivotal movement between the links 31 and 32 in an upward direction, that is to say, with the pivot 40 moving upwardly towards the hinge connection between the leg and table top so as to fold the leg. When the leg is to be folded, the links 31 and 32 are pressed downwardly out of the operative aligned position of the three brace pivots after which the leg may readily be swung to its folded position. Any one or all of the pivotal connections 33, 34 and 40 of the brace structure may be made sufficiently tight so as to frictionally hold the brace in operative position as shown in Fig. 3, and so as to prevent accidental buckling of the brace, or any other suitable means may be provided.

It will be seen that the above described structure is such that a strong and rigid table construction is provided without requiring numerous complex and different parts. All the parts used in the construction above described are simple in form and easy to make, so that the structure may be made at low cost for both materials and labor, while strength, rigidity and general appearance of the table are not impaired.

I am aware that changes may be made in the above described structure without departing from the spirit of my invention, the scope of which should be determined by reference to the following claims, construing the same

as broadly as possible consistent with the state of the art.

I claim as my invention:

1. In a folding table of the class described, the combination of a table top, legs for supporting said top, said legs being pivotally secured to said top so as to be foldable from extended position to folded position substantially flatwise adjacent the under side of the top, and means for so mounting each of said legs comprising a pair of substantially like brackets, one secured to said top and the other to said leg, said brackets being substantially U-shaped and having transverse ear portions projecting from their ends, the ear portions of the respective brackets being pivoted together.

2. In a folding table of the class described, the combination of a table top, legs for supporting said top, said legs being pivotally secured to said top so as to be foldable from extended position to folded position substantially flatwise adjacent the under side of the top, and means for so mounting said legs comprising pairs of similar substantially U-shaped brackets respectively secured to said top and legs, each of said brackets having ears spaced a substantial distance apart, the ears of the respective brackets being arranged in mutually overlapping relation and pivoted together, the spacing of said ears being such as to prevent material wavering of the legs in the direction of the pivot axis.

3. In a folding table of the class described, the combination of a table top, legs for supporting said top, said legs being pivotally secured to said top so as to be foldable from extended position to folded position substantially flatwise adjacent the under side of the top, and means for so mounting the legs comprising pairs of similar substantially U-shaped brackets for each leg, each pair comprising a bracket member secured to said table top, a bracket member secured to the leg, each of said brackets being provided with spaced, axially aligned pivotal connections, the spacing thereof being such as to prevent material wavering of the legs in the direction of the pivot axis.

4. In a folding table of the class described, the combination of a table top, legs for supporting said top, said legs being pivotally secured to said top so as to be foldable from extended position to folded position substantially flatwise adjacent the under side of the top, and means for so mounting each of said legs comprising a pair of similar substantially U-shaped brackets of substantial width and of considerably greater length than width, the length of one of said brackets extending transversely of said leg and said parts being welded together across substantially the entire width of the bracket, the other of said brackets being secured to said table top and hinged to said first bracket, and a marginal frame depending from said table top, of sufficient width to substantially conceal said brackets.

5. In a folding table of the class described, the combination of a table top, legs for supporting said top, said legs being pivotally secured to said top so as to be foldable from extended position to folded position substantially flatwise adjacent the under side of the top, and means for so mounting each of said legs comprising a pair of similar substantially U-shaped brackets of substantial width and of considerably greater length than width, the length of one of said brackets extending transversely of said leg and said parts being welded together across substantially the entire width of the bracket, the other of said brackets being secured to said table top and hinged to said first bracket.

FRANK B. HARMAN.