H. L. HASKELL.

FOLDING TABLE.

APPLICATION FILED NOV. 4, 1912.

1,131,780.

Patented Mar. 16, 1915.

2 SHEETS—SHEET 1.

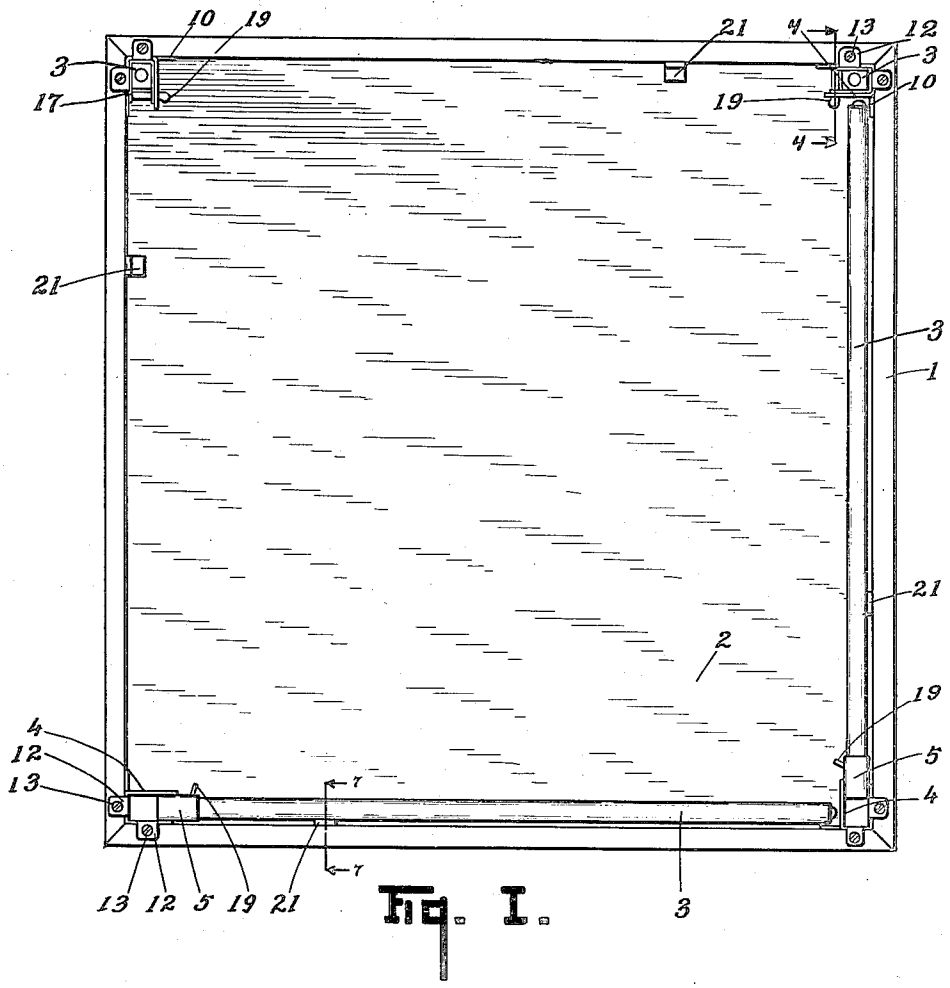


Fig. I.

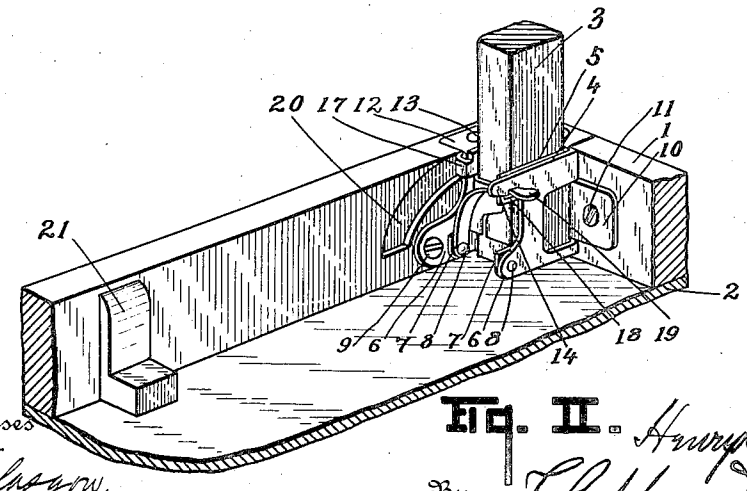


Fig. II.

Witnesses

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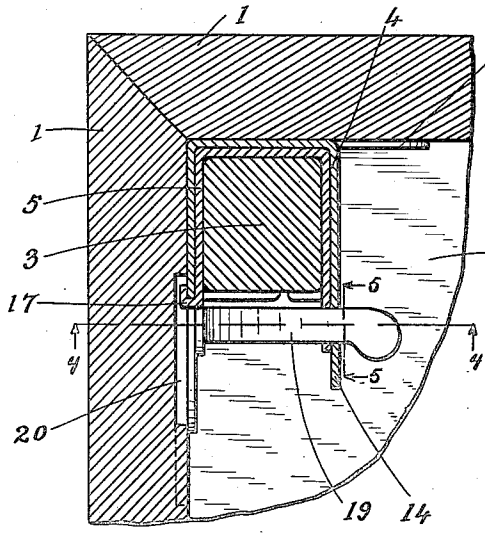


Fig. III.

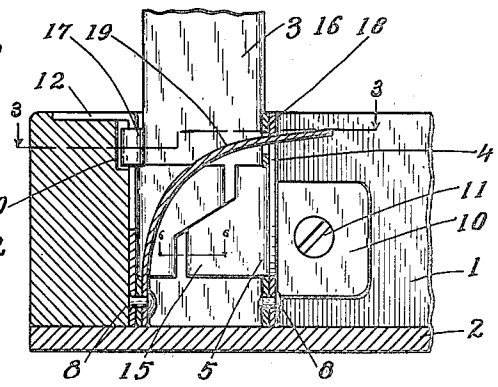


Fig. IV.

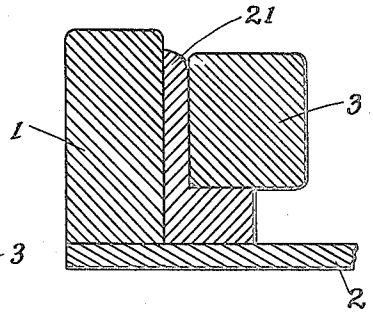


Fig. VII.

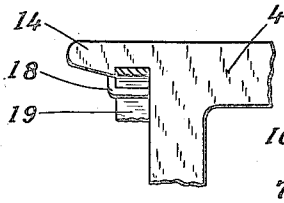


Fig. V.

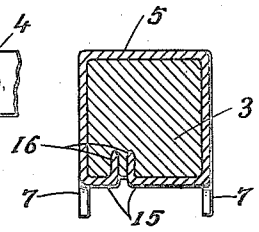


Fig. VI.

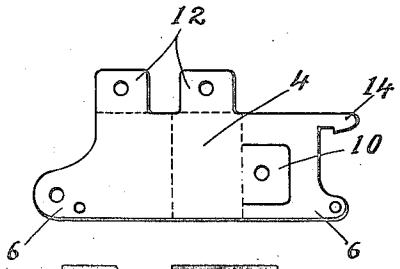


Fig. VIII.

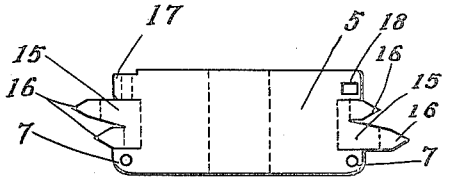


Fig. IX.

Witnesses

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UNITED STATES PATENT OFFICE.

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FOLDING TABLE.

1,131,780. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed November 4, 1912. Serial No. 729,196.

To all whom it may concern:

Be it known that I, HENRY L. HASKELL, a citizen of the United States, residing at Ludington, Michigan, have invented certain new and useful Improvements in Folding Tables, of which the following is a specification.

This invention relates to improvements in folding tables.

The main objects of this invention are, first, to provide in a folding table, an improved leg connection in which the legs, when erected, are automatically locked in their erected position and are very rigid without the necessity of providing braces therefor. Second, to provide an improved folding table in which the hinge members for the legs attached to the frame constitute frame members. Third, to provide an improved folding table in which the legs are connected to the top bed or frame and supported entirely thereby.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing forming a part of this specification, in which:

Figure I is an inverted view of a structure embodying the features of my invention, two of the legs being folded and two erected. Fig. II is an inverted perspective view of one corner of the table with the leg erected. Fig. III is a detail horizontal section on a line corresponding to the broken line 3—3 of Fig. IV. Fig. IV is a detail vertical section on a line corresponding to 4—4 of Figs. I and III. Fig. V is a detail section on a line corresponding to line 5—5 of Fig. III, showing details of the catch. Fig. VI is a detail section on a line corresponding to line 6—6 of Fig. IV, showing the manner of attaching the legs to the leg member of the hinge. Fig. VII is a detail vertical section on a line corresponding to line 7—7 of Fig. I, showing details of the supporting block 21. Fig. VIII is a plan of the blank from which the outer or frame member is formed. Fig. IX is a plan view of the blank from which the inner or leg member is formed.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, the top of the structure illustrated consists of a rectangular bed or frame 1 formed of side pieces connected by beveled joints as shown, and a panel-like top 2 of veneer or paperboard or the like. The bed may be provided with cross pieces for supporting the thin panel top if desired, but as the legs are supported entirely from the frame and as the arrangement of the cross pieces form no part of this invention, they are not illustrated herein.

The legs 3 are pivotally connected to the frame by hinges comprising hinge members 4 secured to the frame and hinge members 5 secured to the legs and pivoted to the hinge members 4. The hinge members are preferably sheet metal stampings of U-shape, arranged one within the other, the outer being the frame member and the inner, the leg member. As the hinges are all alike I refer to only one in the following description.

The frame member 4 is provided with forwardly projecting pivot ears 6 adjacent to the upper edges of its arms. The hinge member 5 is provided with forwardly projecting pivot ears 7 adjacent to the upper edges of its arms. These ears are connected by the pivots 8. The outer or frame member is arranged in a corner of the frame with its outer arm against one side and its bight or outer end against the adjacent side of the frame. The pivot ear of the outer arm is extended to receive the attaching screw 9. An attaching ear 10 is struck out from the inner arm to receive the attaching screw 11. On the lower edges of the outer arm and the inner end of the member 4 are laterally projecting flange-like attaching ears 12 which rest against the under sides of adjacent side members of the frame and are secured thereto by the screws 13.

The inner arm of the outer member is provided with an upwardly facing forwardly projecting keeper 14. The leg is arranged in the member 5 and secured therein by the clamping arms 15 having attaching prongs

16 thereon, the arms being clamped on the forward sides of the leg. The leg member is provided with a hook-like stop 17 on its outer arm coacting with the forward edge of the outer arm of the frame member. The inner arm of the leg member is provided with a forwardly projecting slotted support 18. The latch 19 is mounted on the outer pivot for the outer arms, and arranged through this slot to coact with the keeper 14. The support 18 supports the catch laterally and also limits its movement, holding it in position to automatically engage the keeper when the leg is erected and limiting its swing so that it is not likely to be distorted in its manipulation. The frame has a segmental slot 20 for the accommodation of the stop 17. To hold the legs in collapsed position and to provide stops therefor I secure angled blocks 21 on the inner sides of the side pieces of the frame to face inwardly and downwardly so that the legs swing into the same. By thus forming and assembling the parts, I provide a structure in which one of the hinge members for the legs constitute corner irons or frame members bracing and connecting the side pieces of the frame. Further, the legs are automatically locked and are effectively supported in their erected position without the use of braces, which is of decided advantage in structures of this character where the tables are frequently of small dimensions and leg braces are frequently objectionable and in the way.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a structure of the class described, the combination with a rectangular frame, of a leg; a hinge therefor comprising a U-shaped frame member having forwardly projecting pivot ears adjacent to the upper edges of its arms and an upwardly facing forwardly projecting keeper on its inner arm, said member being arranged in a corner of said frame with its outer arm secured to one side thereof and its outer end secured to the adjacent side, whereby said hinge member constitutes a frame member; a U-shaped leg member arranged on said leg and disposed in said frame member and having a pair of forwardly projecting pivot ears adjacent to the upper edges of its arms; and a forwardly projecting slotted catch support on its inner arm; pivots; and a spring catch mounted on the pivot of the outer arms of said members and arranged through said slot in said catch support to coact with said keeper, said catch being laterally supported and its swinging movement limited by its said support.

2. In a structure of the class described, the combination with a rectangular frame, of a leg; a hinge therefor comprising a U-shaped outer member having an upwardly facing forwardly projecting keeper on its inner arm, said member being arranged in a corner of said frame with its outer arm secured to one side thereof and its outer end secured to the adjacent side whereby said hinge member constitutes a frame member; a U-shaped leg member arranged on said leg and disposed in said outer member with its arm pivoted to the arms thereof; and having a stop on its outer arm coacting with the edge of the outer arm of the frame member and a forwardly projecting slotted catch support on its inner arm; and a spring catch mounted on the pivot of the outer arms of said members and arranged through said slot in said catch support to coact with said keeper.

3. In a structure of the class described, the combination with a rectangular frame, of a leg; a hinge therefor comprising a U-shaped outer member having an upwardly facing forwardly projecting keeper on its inner arm, said member being arranged in a corner of said frame with its outer arm secured to one side thereof and its outer end secured to the adjacent side whereby said hinge member constitutes a frame member; a U-shaped leg member arranged on said leg and disposed in said outer member with its arms pivoted to the arms thereof.

4. A structure of the class described, comprising a U-shaped outer member having a keeper on one of its arms; a U-shaped inner member arranged in the outer member, with its arms pivotally connected to the arms thereof, and having a stop on one of its arms coacting with the corresponding arm of the outer member and slotted catch support on its other arm; and a spring catch arranged through said slot in said catch support to coact with said keeper.

5. A structure of the class described, comprising a U-shaped outer member having a keeper on its inner arm; a U-shaped inner member arranged in the outer member, with its arms pivotally connected to the arms thereof and having a slotted catch support on one of its arms; and a spring catch arranged through said slot in said catch support to coact with said keeper.

6. In a structure of the class described, the combination with a rectangular frame, of a leg; a hinge therefor comprising a U-shaped outer member arranged in a corner of said frame with its outer arm secured to one side thereof and its outer end secured to the adjacent side, said outer arm being extended into an attaching ear, there being an attaching ear struck out from its inner arm and laterally turned attaching ears at the lower edges of its inner end and outer arm secured to the under side of the side members of the frame whereby said hinge member constitutes a frame member; and a leg member disposed within said frame member and pivoted thereto.

7. The combination with a rectangular frame, of a leg, and a hinge for said leg comprising outer and inner U-shaped members arranged one within the other, the arms of the inner member being pivoted to the arms of the outer member, the outer member being arranged in a corner of said frame with its outer arm secured to one side thereof, and its outer end secured to the adjacent side, the inner member being arranged upon the leg.

8. The combination with a frame, of a leg and a hinge for said leg comprising outer and inner U-shaped members arranged one within the other, the arms of the inner member being pivoted to the arms of the outer member, the outer member being secured to the frame, the inner member being arranged upon the leg and having integral attaching arms provided with prongs clamped upon the front side of the leg.

9. In a structure of the class described, the combination with a rectangular frame, of a leg, a hinge therefor comprising a U-shaped frame member arranged in a corner of said frame with its outer arm secured to one side thereof and its inner arm secured to the adjacent side, there being an attaching ear struck out from its inner arm and laterally turned attaching ears on the lower edges of its outer end and outer arm secured to the under sides of the side member of the frame, whereby said hinge member constitutes a frame member, and a leg member pivoted between the arms of said frame member.

10. In a structure of the class described, the combination with a rectangular frame, of a leg, a hinge therefor comprising a U-shaped frame member arranged in a corner of said frame with its outer arm secured to one side thereof and its inner arm secured to the adjacent side, there being an attaching ear struck out from its inner arm whereby said hinge member constitutes a frame member, and a leg member pivoted between the arms of said frame member.

11. In a structure of the class described, the combination of a frame, a leg, and a connection for said leg to said frame comprising a frame member open at the front and having a keeper on one of its arms, a leg member secured to said leg and pivotally mounted within said frame member to swing into the same when the leg is erected, said leg member being provided with a forwardly projecting slotted catch support and a pivoted spring catch arranged through the slot of said catch support whereby the catch is swung with the leg into engagement with the keeper when erected, the slot being adapted to permit the springing of the catch to permit its engagement and disengagement.

12. The combination with a frame, of a leg, a combined leg hinge and support comprising a frame member open at its front side, and a leg member pivoted between the arms of said frame member and provided with a laterally facing hook-like stop engaging the front edge of one of the arms of the frame member when the leg is swung to its erected position.

13. The combination with a frame, of a leg, a combined hinge and support for said leg comprising U-shaped frame and leg members, the frame member being open at the front between its arms, the leg member being disposed between the arms of said frame member and embracing and secured to the end of the leg, a pivotal connection for the front ends of the arms of said members disposed near their upper edges and so that the leg member swings into the frame member when the leg is erected and its arms and outer end are engaged and supported by the arms and outer end of said frame member, a catch member mounted to swing with said leg member, and a keeper on said frame member, said catch and keeper members coacting to support the leg on the open side of said frame member.

14. The combination with a frame, of a leg, a combined hinge and support for said leg comprising U-shaped frame and leg members, the frame member being open at the front between its arms, the leg member being disposed between the arms of said frame member and embracing and secured to the end of the leg, a pivotal connection for the arms of said members disposed so that the leg member swings into the frame member when the leg is erected and its arms and outer end are engaged and supported by the arms and outer end of said frame member, and coacting catch and keeper members on said frame and leg members supporting said leg on the open side of said frame member.

15. In a folding table, the combination with a top frame and a leg, of a combined hinge and support for said leg comprising a U-shaped frame member open at the front between its arms disposed in a corner of said frame with its outer arm secured to one frame piece and its outer end secured to the adjacent frame piece whereby said frame members is rigidly supported and constitutes a frame reinforcing member, a leg member secured upon said leg and disposed between the arms of said frame member, a pivotal connection for said leg member to said frame member disposed at the upper edges of the arms of said frame member and at the front of the leg, so that the leg when collapsed lies within the said top frame, and when erected swings into said frame member and is embraced and supported by the arms and outer end thereof, a catch member mounted at the front of the leg member to swing therewith to engag-

ing position when the leg is erected, and a keeper on said frame coacting with said catch to support the leg member when erected on the open side of said frame member.

16. In a folding table, the combination with a top frame and a leg, of a combined leg hinge support comprising a frame member open at its front side disposed in a corner of said frame and secured to the adjacent frame pieces whereby said frame member is rigidly supported and constitutes a frame reinforcing member, a leg-member secured to the upper end of said leg and disposed between the arms of said frame member, a pivotal connection for said leg member to said frame member disposed near the upper edges of said frame member and at the front of the leg, so that the leg when collapsed lies in the open end of the frame member within the said top frame, and when erected swings into said frame member and is embraced and laterally supported on three sides by the arms and outer end thereof, a catch member carried by said leg member whereby it is swung to engaging position by the erection of the leg, and a keeper on said frame member coacting with said catch to laterally support the leg member on its fourth side when the leg is erected.

17. In a folding table, the combination with the table top frame and table legs, of combined leg hinges and supports comprising frame members open at their front sides rigidly secured within said top frame, leg members secured to the upper ends of said legs and disposed between the arms of said frame members, pivotal connections for said leg members to said frame members disposed so that the legs when collapsed lie in the open ends of the frame members and within said top frame and when erected swing into said frame hinge members and are embraced and laterally supported on three sides by the arms and outer ends thereof, keepers on said frame members, and automatic catch members operatively connected to said leg members to swing therewith into engagement with said keepers when the legs are erected and laterally support the legs on the open sides of said frame members, said legs being entirely supported by said frame members against lateral movement and the space below the top frame between the legs being unobstructed by leg braces.

18. In a folding table, the combination with the table top frame and table legs, of combined leg hinges and supports comprising frame members open at their front sides rigidly secured within said top frame, leg members secured to the upper ends of said legs and disposed between the arms of said frame members, pivotal connections for said leg members to said frame members disposed so that the legs when collapsed lie in the open ends of the frame members and within said top frame and when erected swing into said frame hinge members and are embraced and laterally supported on three sides by the arms and outer ends thereof, keepers on said frame members, and catch members operatively connected to said leg members to swing therewith and engaging with the keepers to laterally support the legs on the open sides of said frame members, said legs being entirely supported by said frame members against lateral movement and the space below the top frame between the legs being unobstructed by leg braces.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

HENRY L. HASKELL. [L. S.]

Witnesses:
WM. J. MULDER,
GEO. A. MASTERSON.