D. BUEL.

LOCKING DEVICE FOR FOLDING TABLES.

APPLICATION FILED SEPT. 29, 1906. RENEWED DEC. 8, 1908.

927,773. Patented July 13, 1909.

Fig. 1.

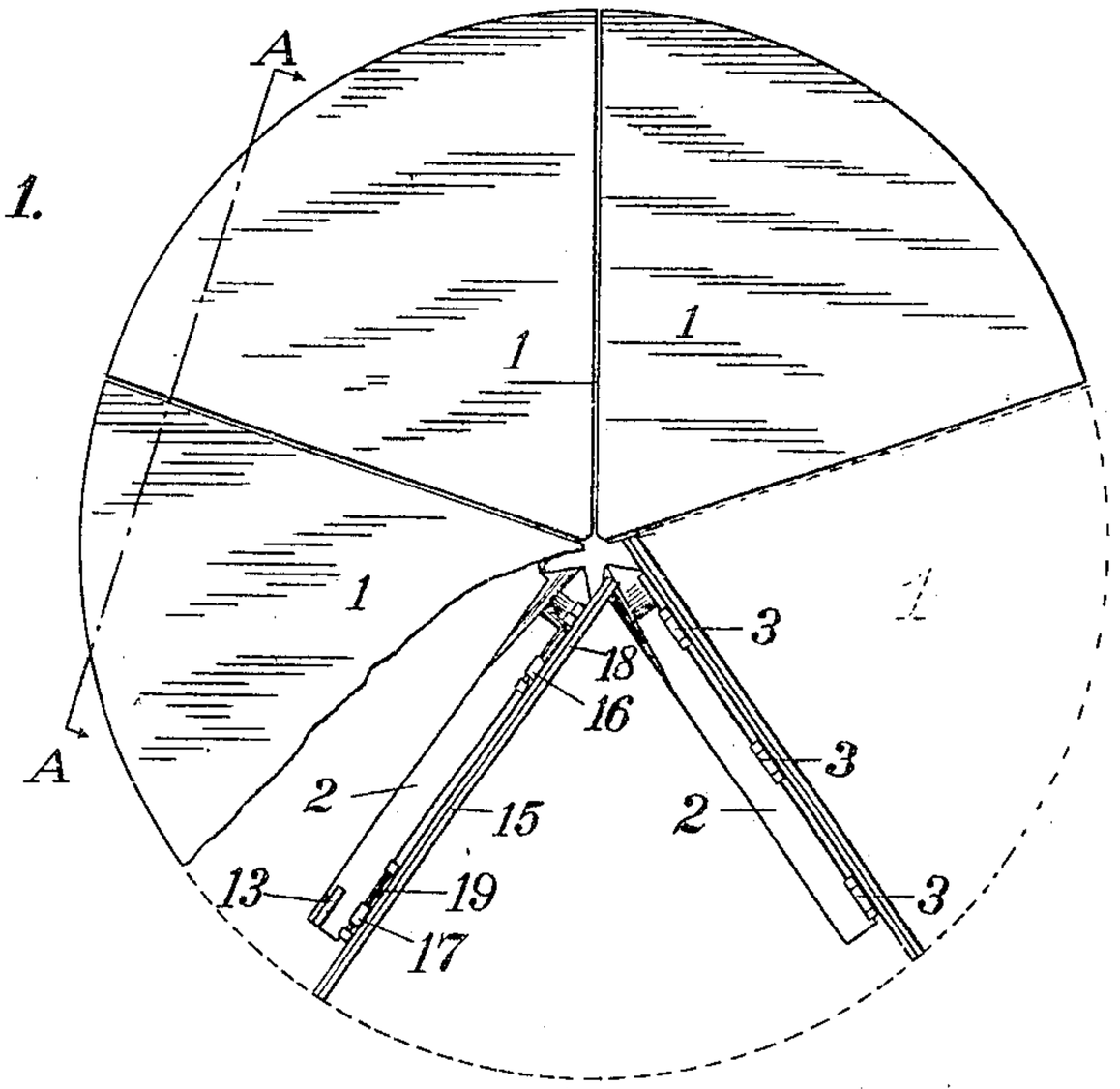


Fig. 2.

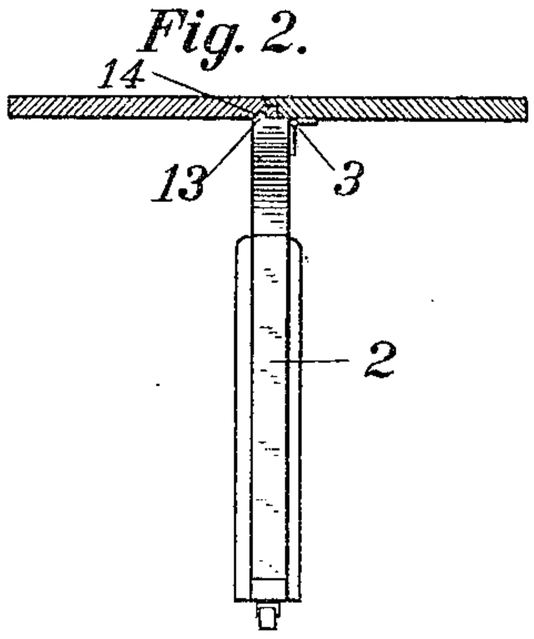


Fig. 3.

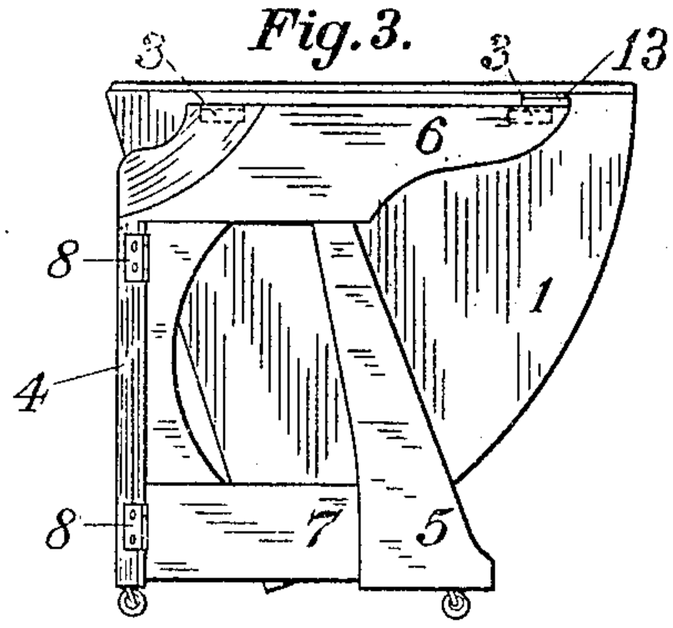


Fig. 4.

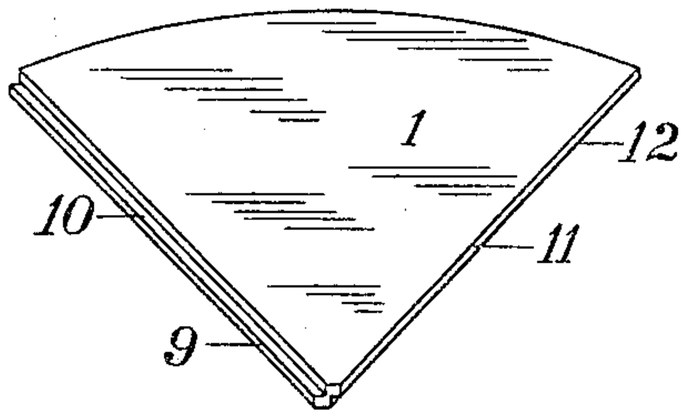
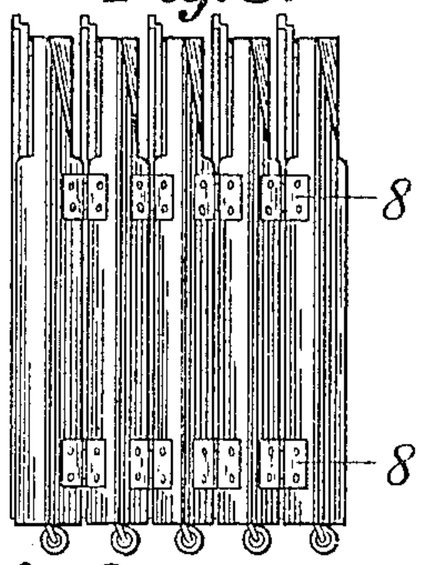


Fig. 5.



WITNESSES:

R. Mirklajohn.

A. Rader.

David Buel INVENTOR.

BY

Geo. W. Rightmire ATTORNEY.

UNITED STATES PATENT OFFICE.

DAVID BUEL, OF COLUMBUS, OHIO.

LOCKING DEVICE FOR FOLDING TABLES.

No. 927,773. Specification of Letters Patent. Patented July 13, 1909.

Application filed September 29, 1906, Serial No. 336,802. Renewed December 8, 1908. Serial No. 466,560.

To all whom it may concern:

Be it known that I, DAVID BUEL, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented new and useful Improvements in Locking Devices for Folding Tables, of which the following is a specification.

My invention relates to improvements in the means for locking the leaves of folding tables in their open position, and has especial reference to the kind of table shown and described in Letters Patent No. 726,787, granted to John E. Turner.

It contemplates the provision of a projection upon the top rail of a table frame as there shown, and a recess adjacent the free radial edge of the leaf adapted in its horizontal position, to rest on said frame, said projection being adapted to enter said recess, whereby the leaf and frame are locked against horizontal separation.

It further contemplates the provision of overlapping surfaces on the radial edges of the leaves, whereby the hinge edge of one leaf overlaps and clamps firmly into position the free radial edge of an adjacent leaf when both of said leaves are in their open position, whereby the leaves are locked completely against vertical separation, and are also thereby held in a measure against horizontal separation.

To accomplish these purposes I provide a construction of which a preferable embodiment is illustrated in the drawings, in which—

Figure 1 is a plan view of a table having my improvements, parts thereof being broken away; Fig. 2 is a transverse section through overlapping leaves, showing the locking means; Fig. 3 is a side view of one frame with its attached leaf; Fig. 4 is an end view of a leaf showing the longitudinal lips thereon; Fig. 5 is an inner end view of the table in its folded position.

Throughout the drawings the same parts are indicated by the same numerals of reference.

The table comprises the leaves 1 mounted upon the leg members 2 by means of hinges 3, each leaf having preferably two or more hinges to assure the proper degree of rigidity. Each leg is composed, as illustrated, of the inner vertical member 4, the outer vertical member 5, the top rail 6 upon which the leaf is pivotally mounted, and the lower cross bar 7. Each leg with its attached leaf may be called an element, and three or more elements, as desired, constitute a table. Each element with its leaf in folded position is adapted to be in a vertical plane, and is pivotally attached to the adjacent elements by means of hinges 8, preferably two or more hinges being used for this purpose; the elements thus pivotally secured together are adapted to be folded to occupy parallel vertical planes, and to be unfolded by moving their free ends apart to occupy divergent vertical planes. If a sufficient number of elements be provided, when unfolded their inner ends will be grouped about a common center, and the leg member of each element extends along a radius of the circle thus formed.

In the open position of the elements just described, the leaves are adapted to be swung upwardly, and the leaf secured to one element is seated with its free radial edge on the top rail of the adjacent element, said top rail not being completely covered by the radial edge of the leaf secured thereon. When in their open horizontal position the leaves are adapted to be locked to the adjacent legs and to each other in a manner now to be described.

The leaves are each formed with a longitudinally extending lip 9 on the lower side of its free radial edge 10, and a longitudinally extending lip 11 on the upper side of its hinge radial edge 12; the free radial edge of a leaf is positioned upon the top rail of an adjacent leg, and the leaf pivoted to said adjacent leg is swung upwardly to its open horizontal position, and the lip 11 thereon overlaps the lip 9 on the superposed leaf and clamps the same tightly against the top rail, as appears in Fig. 2. In this position, vertical separation of the two leaves is impossible and at the same time lateral separation is rendered very difficult. To prevent completely the lateral separation of the leaves thus brought into engagement, each top rail, except one as hereinafter noted, is provided with a projection 13 on its upper face, preferably near the outer end of said face; each leaf, except one as hereinafter noted, on its under face, near its free radial edge is provided with a recess 14, and when the free radial edge of one leaf is being positioned upon the top rail of an adjacent leg, the recess 14 receives the projection 13, and by their engagement lateral separation is prevented unless the said leaf be first lifted vertically to

disengage the projection from the recess. The engagement of the projection and recess also determines the proper relative position of the two leaves for the ready and effective engagement of the lower lip on the one with the upper lip on the other. The provision of the projection and recess, and the lips adapted to be brought into engagement renders the proper positioning of the free radial edge of each leaf upon the top rail of the adjacent leg certain, and the clamping of said leaf upon the adjacent leg positive and automatic, inasmuch as merely the raising of the leaf, pivoted to said adjacent leg, into its open horizontal position, produces the clamping effect.

One leaf, 15, is mounted to admit of a radial movement inwardly and outwardly and is adapted to be brought to its open position in forming the table after the remaining leaves have been properly positioned, as follows: The leaf is provided with a plurality of hinge eyes 16, 17, adapted to receive the hinge rods 18, 19, which are appropriately secured upon the top rail of the leg to which this leaf is pivoted, and to slide freely thereon radially. If the leaf be swung upwardly to a horizontal position and given an inward movement, its free radial edge is seated upon the top of the adjacent leg; as the inward movement is continued, the sliding leaf produces lateral pressure upon the contiguous leaf with its free radial edge, and the pressure is communicated to the other leaves around the circle of the table top and when it is firmly positioned and the circular table top, as illustrated, is completed, it will be seen that the leaf 15 acts as a key leaf to force all the leaves into close contact all around the circle and the table is thereby rendered firm.

It is seen that in positioning the leaf 15 it is first drawn radially outwardly, then swung upwardly on its hinges and then pushed inwardly in a radial direction; it will be understood, however, that two or more elements may be utilized as a fractional table, when desired, the remaining elements being left folded; in this manner the fractional table may be made to occupy the corner of a room. It is clear when only a part of the elements are used, the locking function of the leaf 15 above described, is not employed. It is noted that the leaf 15 is not provided with the recess 14, nor is the top of the leg upon which the free radial edge of the leaf 15 is supported when in its open position provided with the projection, said construction being unnecessary in respect to this leaf.

What I claim as new and desire to secure by Letters Patent is:—

1. A folding table comprising three or more leg members, a leaf pivotally mounted near one edge on the upper end of each of said leg members and adapted to be swung from a vertical to a horizontal position and supported with its opposite edge upon the upper end of an adjacent leg member, the pivoted edge of each of said leaves when in horizontal position each overlapping the upper end of its respective leg member, and being undercut to form an overhanging lip along said pivoted edge, the opposite edge of each leaf having a lip formed thereon to receive said overhanging lip of the adjacent leaf when in horizontal position, whereby as each leaf is swung into horizontal position, its pivoted edge acts to bind the free edge of the preceding leaf down upon the leg member and thus hold said leaf against vertical movement.

2. A folding table comprising three or more leg members, a leaf pivotally mounted near one edge on the upper end of each of said leg members, and adapted to be swung from a vertical to a horizontal position and supported with its opposite edge upon the upper end of an adjacent leg member, the pivoted edge of each of said leaves when in horizontal position each overlapping the upper end of its respective leg member, and being undercut to form an overhanging lip along said pivoted edge, the opposite edge of each leaf having a lip formed thereon to receive said overhanging lip of the adjacent leaf when in horizontal position, and a projection on the upper end of each of certain leg members, said projection being positioned to engage a recess formed in the under surface of the free edge of the preceding leaf, whereby as each leaf is swung into horizontal position, its pivoted edge acts to bind the free edge of the preceding leaf down upon the leg member and said projection, and thus to hold said leaf against horizontal and vertical movement.

In testimony whereof I affix my signature in the presence of two witnesses.

DAVID BUEL.

Witnesses:
C. E. Ellis,
Arvilla Rager.