G. J. NICHOLS AND B. F. OREAR.

FOLDING TABLE.

APPLICATION FILED NOV. 18, 1920.

1,402,174. Patented Jan. 3, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

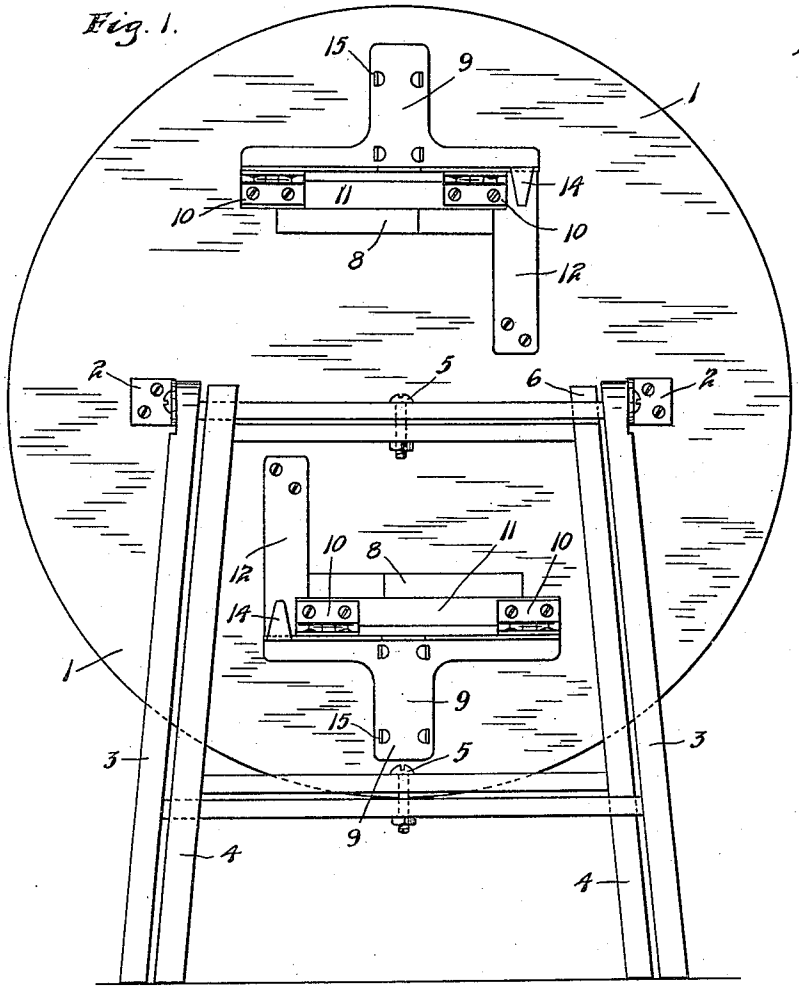


Fig. 2.

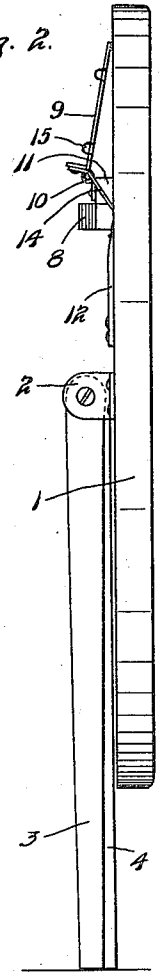
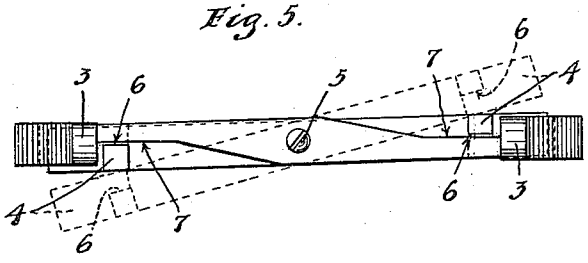


Fig. 5.



INVENTORS.
GEORGE J. NICHOLS.
BENJAMIN F. OREAR.
BY THEIR ATTORNEY.
James F. Williamson

G. J. NICHOLS AND B. F. OREAR.

FOLDING TABLE.

APPLICATION FILED NOV. 18, 1920.

1,402,174. Patented Jan. 3, 1922.

2 SHEETS—SHEET 2.

Fig. 3.

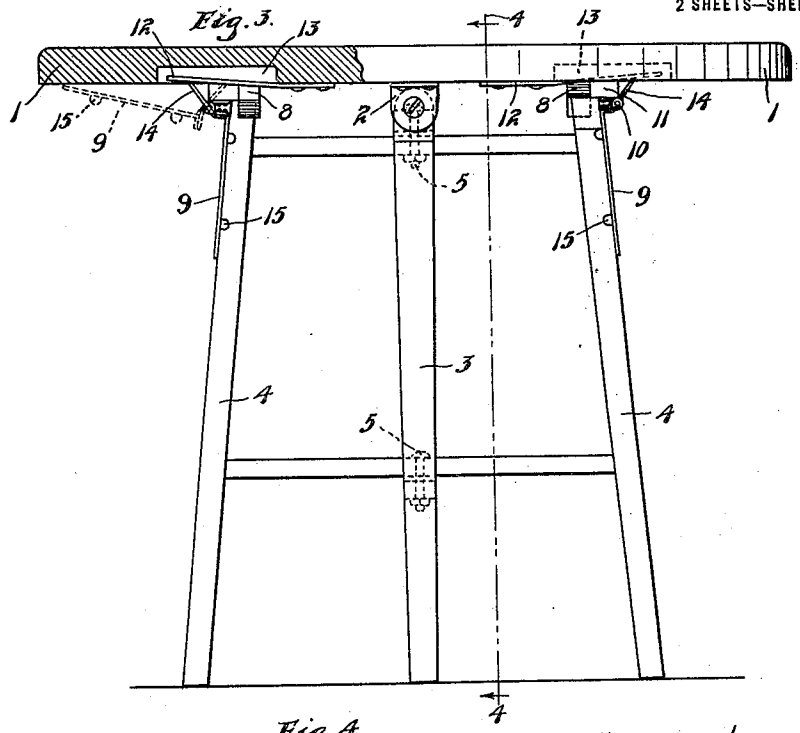
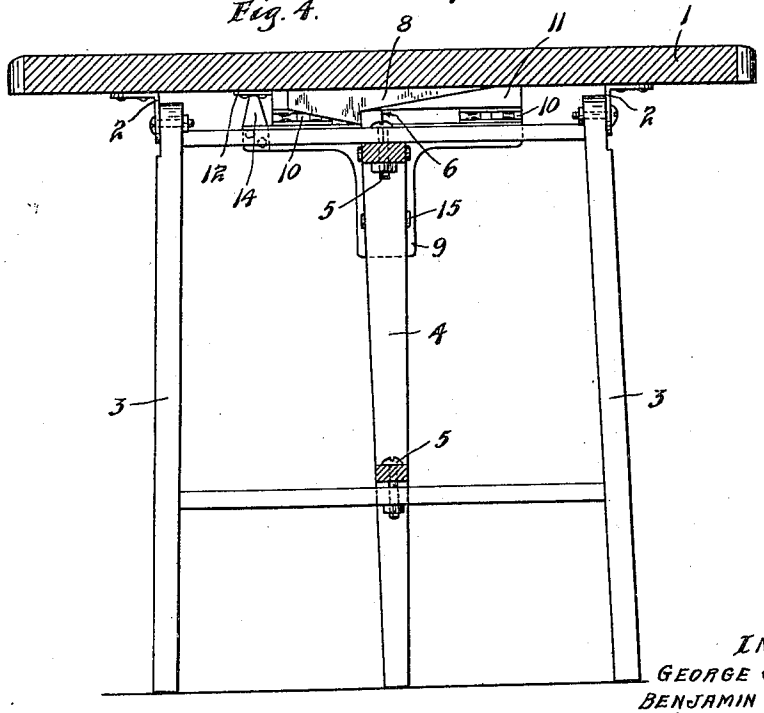


Fig. 4.



INVENTORS
GEORGE J. NICHOLS
BENJAMIN F. OREAR.
BY THEIR ATTORNEY.
James F. Williamson

UNITED STATES PATENT OFFICE.

GEORGE J. NICHOLS AND BENJAMIN F. OREAR, OF MINNEAPOLIS, MINNESOTA.

FOLDING TABLE.

1,402,174. Specification of Letters Patent. Patented Jan. 3, 1922.

Application filed November 18, 1920. Serial No. 424,870.

To all whom it may concern:

Be it known that we, GEORGE J. NICHOLS and BENJAMIN F. OREAR, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Folding Tables; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a folding table and particularly to the type in which the top of the table is rigid and the legs thereof are constructed to fold into close contact and substantial parallelism with the top.

It is an object of this invention to provide a table having pivoted legs thereon which are rigidly and positively held in a table supporting position.

Further objects and advantages of the invention will become apparent from the following description made in connection with the accompanying drawings in which like reference characters refer to the same parts throughout the different views, and in which—

Fig. 1 is a view in elevation looking at the under surface of the table when the table is in folded position;

Fig. 2 is a side elevation of the table in the same position as seen from the right of Fig. 1;

Fig. 3 is a view in elevation of the table with the legs disposed in table supporting position, part of the table being shown in section; and

Fig. 4 is a section taken substantially on the line 4—4 of Fig. 3.

Fig. 5 is a top view of the leg frame structure detached from the top of the table.

Referring to the drawings, the top of the table which may be of any desired shape, but is illustrated as round, is designated at 1, and has at its under side in spaced relation along a diameter thereof, lugs 2 which are rigidly secured thereto by screws, or other suitable means. A pair of legs 3 rigidly secured together by spaced screw members have their upper ends rounded and pivoted to the lugs 2 by any suitable means, such as the threaded bolt shown. Another pair of legs 4 are provided and also rigidly secured together by cross members disposed between the cross members of legs 3 to which they are pivoted by suitable threaded screws 5 aligned in an axis which extends centrally of the pairs of legs and the table. The tops of the legs 4 extend above the upper cross member thereof and are cut away to provide shoulders 6, which shoulders are oppositely disposed on the respective legs and adapted to contact with the upper connecting member of legs 3. This upper connecting member of legs 3 is made narrow at its ends and disposed at opposite sides, respectively, of the legs 3 to provide spaces 7 which receive the portions of the legs 4 which extend above the upper connecting member thereof. The lower connecting member of the legs 3 is similarly formed to provide spaces to receive the lower portion of the legs 4. By this construction, the pair of legs 4 can be swung into substantial alignment with the legs 3 and both pairs swung into close proximity and parallelism with the table top 1, as shown in Fig. 2.

When the legs are to be disposed to support the table, the same are swung into position substantially normal thereto and the legs 4 are then swung on the pivots 5 until the cross members thereof are substantially at right angles with the cross members of the legs 3. Oppositely disposed wedge members 8 are secured to the under surface of the table and have shoulder forming projections thereon. These wedges are suitably spaced so that when the legs 4 are swung into table supporting position, the ends thereof will contact with the surface of the wedges, and be forced slightly downwardly or toward their free ends, when stress is thus placed upon the bolts and the lugs 2 and upon the pivot bolts 5 and the legs are thus firmly and rigidly held in position. The sides of the legs 4 will contact with the shoulders on the wedges and the legs thus brought into proper position.

To hold the legs securely in their table supporting position, spring pressed retaining members 9 are provided at opposite sides of the table top on the under surface thereof. These members 9 have base portions of considerable width, which portions are formed as right angle channels and to one side of which are suitably secured hinges 10. These hinges are also secured to the table top through the medium of filling pieces 11. Leaf springs 12 are fastened at one end to

the under surface of the table top and extend in alignment with one end of the members 9. The ends of these springs extend over suitably formed recesses 13. A lug 14 is rigidly secured to the member 9 at one end thereof, the end of which is so disposed as to be in contact with the leaf spring 12. The members 9 have a central portion extending normal to the wide base portion and this central portion has thereon leg engaging flanges 15. These flanges are shown as lugs struck up from the body of the member 9, but it will be understood that any suitable flange member may be used which will be either integral with or secured to the member 9. When the legs have been swung to table supporting position, the members 9 which, when the table is in folded position, are disposed as shown in Figs. 1 and 2, will be swung on the hinges 10 into position as shown in Fig. 3, in which the central portion thereof will contact with the legs 4 and the flange portions 15 will embrace the sides thereof. When the members 9 are swung to this leg-engaging position, the lug 14 presses against the leaf spring 12 which is thus placed under tension, and holds the members 9 securely in position. The legs of the table are thus firmly held in table supporting position and are locked so that they cannot be swung or moved out of this position until the members 9 are disengaged therefrom and swung outwardly against the tension of springs 12.

The table constructed as set forth above can be very quickly arranged in either its normal or folded positions. It will be noted that the lugs 14 are always in contact with the leaf springs 12 so that when the table is in folded position, the members 9 cannot flap or swing about, but are held quite firmly in their out-turned positions. When the table is in its normal supported position, it is substantially as firm as if the legs thereon were of the usual solid construction and permanently and rigidly secured thereto.

It will, of course, be understood that various changes may be made in the form and details of the various parts without departing from the scope of applicants' invention, which, generally stated, consists in the matter shown and described and set forth in the appended claims.

What is claimed is:

1. A folding table having a rigid top portion, a pair of legs pivotally connected thereto along an axis substantially parallel to the surface of said portion, a second pair of legs pivoted to the first mentioned pair along a line substantially at right angles to said first mentioned axis, and adapted to be swung in a table-supporting position, wedge means contacting the ends of said second pair of legs to hold the same rigidly in position, and spring means engaging the legs of said second pair for locking the same in table supporting position.

2. A folding table having in combination a rigid top portion, a rigidly connected pair of legs pivoted at their upper ends to said portion, a second pair of rigidly connected legs centrally pivoted to said first mentioned pair and adapted to be swung into substantial right angle relation therewith into table supporting position, a spring actuated member pivoted to the rigid portion of the table so constructed that it is held under spring tension against the last mentioned pair of legs and holding the same in table supporting position, and can be also swung to position substantially parallel to the table portion where it is held under spring tension.

3. A folding table having a rigid top portion, a pair of legs pivoted thereto at their upper ends, a second pair of legs pivoted to said first pair adapted to be swung into table supporting position substantially at right angles to said first mentioned pair, and a hinged plate adapted to engage each one of said second pair of legs, each of said plates having a channel formed therein for engaging said legs, and a spring member for holding said plate under tension in either its leg engaging position or its inoperative position.

4. A folding table having a rigid top portion, a pair of rigidly connected leg members pivoted to said top portion at their upper ends on an axis extending substantially parallel to the surface of said top portion, and a second pair of legs rigidly secured together and centrally pivoted to said first mentioned pair of legs along the axis normal to said first mentioned axis and adapted to be swung into table supporting position at substantially right angles to the first mentioned pair of legs and oppositely disposed wedge members upon which the upper ends of said second mentioned pair of legs are adapted to ride whereby the legs are placed under stress and firmly held in position.

5. A folding table having in combination a rigid top portion, a pair of rigidly connected legs pivoted at their upper portions to the under surface of said top portion, a second pair of legs pivoted to the first mentioned pair of legs on an axis extending normal to the plane of said top portion, and a member adapted to be swung to operative and inoperative positions having means thereon to hold the latter pair of legs in operative position, and spring means acting to hold said member under tension in both operative and inoperative positions.

In testimony whereof we affix our signatures.

GEORGE J. NICHOLS.
BENJAMIN F. OREAR.