March 27, 1956 H. I. COHEN 2,739,859

NESTING TABLE

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Fig. 1.

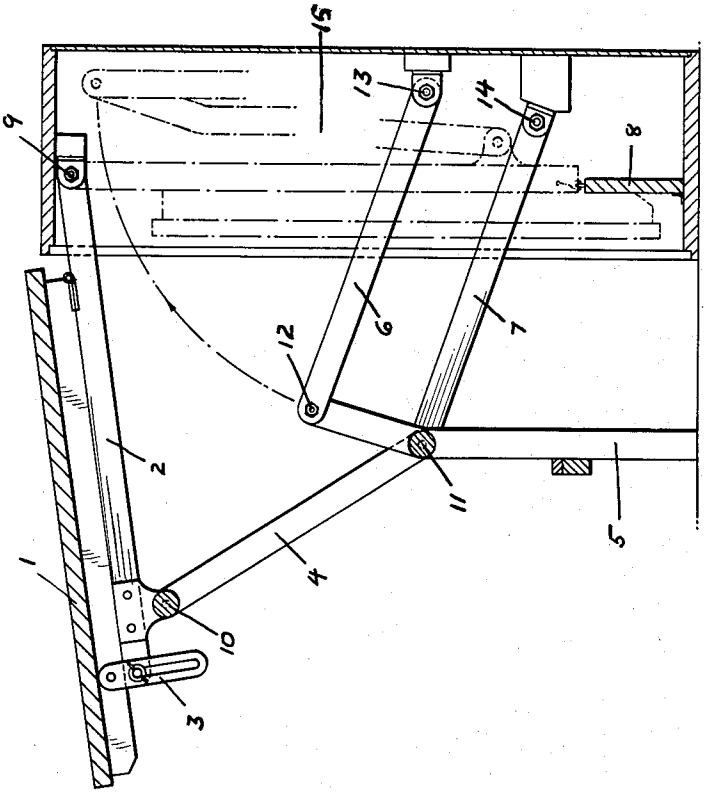
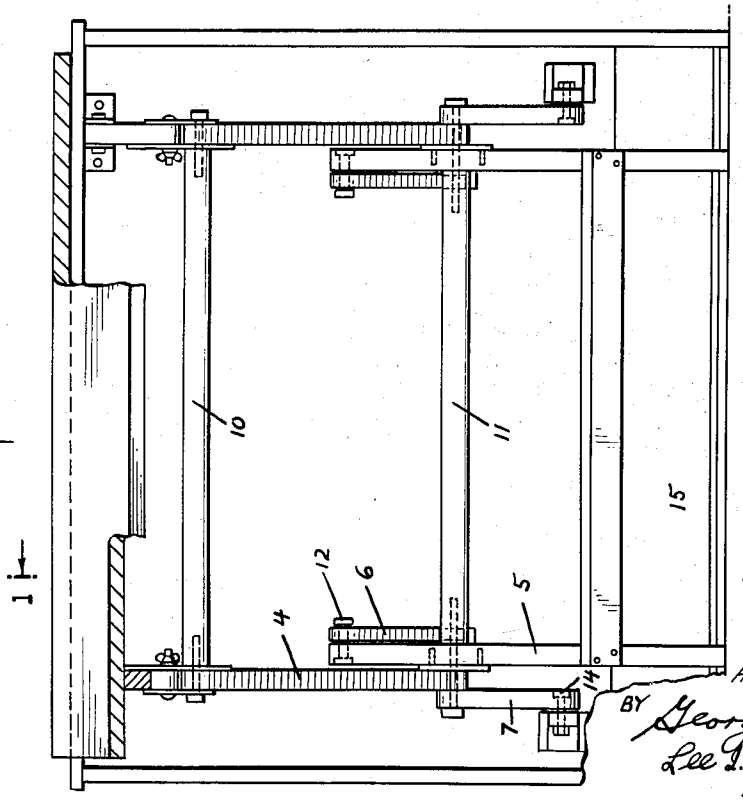


Fig. 2.



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NESTING TABLE

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The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

This invention concerns nesting tables.

An object of the invention is to provide a nesting type table which collapses into a small compact area when not in use.

A further object of the invention is to provide support for a table top which is stronger and yet more readily collapsible than in prior types of nesting tables.

Still a further object of this invention is to provide a nesting type table utilizing a structure which is foldable upon application of upward pressure only, and which, when in support position for the table, may not be collapsed by the application of downward pressure on the table top.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

Fig. 1 is a side elevation of a nesting table, or the like, embodying my invention.

Fig. 2 is a front view of a nesting table embodying my invention.

In Fig. 1, the numeral **1** denotes the table top which is affixed to a table top support **2** which is joined to a cabinet **15** by a pivot **9**. The table top **1** is adjustable in elevation by the elevator and clamp arrangement **3**, which may be of any type known in the art, and which is not of essence in this invention. Affixed to the underportion of the table top supporting member **2**, is a pivot juncture **10** to which is attached arm **4**; the other end of arm **4** is pivotally affixed to the member **5** which, in support position, rests upon the same surface as the cabinet **15**. The member **5** is of straight beam configuration for about three quarters of its length; it then bends at a very slight angle with its former position to continue for the remaining quarter of its length as a straight beam. Pivot juncture **11** is a common junction point for arms **4**, **5** and **7**. Arms **4** and **7** form a knee joint, at the pivot point **11**, which breaks downward. Arm **7** and the upper quarter of arm **5** form the adjacent sides of a parallelogram composed in its entirety of arms **5**, **6**, **7**, and the vertical side portion of the cabinet **15**. The other end of arm **7** is attached by pivot **14** to the cabinet **15**. The arm **6** is joined at one end by pivot **13** to the cabinet **15** and at its other end by pivot **12** to the upper quarter of arm **5**. The baffle stop **8** acts to seat the table top **1** in position when folded in the cabinet; it prevents injury to the elevator and clamp arrangement **3** which would result if the tabletop were to strike the back of the cabinet. Baffle stop **8** is hinged; it is hooked in the position shown.

The operation of the nesting table is as follows:

In its vertical position, the arm **5** acts to support the table top directly through the arms **4** and **2**; Figs. **1** and **2** indicating this supported position. To nest the table, however, pressure must be applied in an upward direction to any of the arms **4**, **6** or **7**, or at the pivot points **11** or **12**. The application of any downward pressure at any of the pivot points by the ordinary use of the table top **1** will not dislodge the support structure, because any forces in the arm **4** will be carried through the arm **5** directly to ground and will not act to shear or force any of the supporting structure over to either side, left or right. The configuration of arm **5** permits arm **6** to maintain the lower part of arm **5** in vertical position without slippage of any kind.

Upon the application of an upward force (which is usually manually applied) to either the pivot point **11** or **12** the arms **6** and **7** will move in an upward arcuate direction toward the cabinet **15**, as will the arm **5**; the arm **4** moving toward the table top in an upward arcuate direction about its pivot point **10** and the arm **5** moving toward the cabinet **15** in an upward arcuate direction about the pivot points **13** and **14**. The arm **5** is supported by the arms **6** and **7** in this upward movement; the function of the arm **7** being primarily to position the arm **5**, and the function of the arm **6** being primarily to hold the arm **5** in position for table top support. As the arms **4**, **5**, **6** and **7** are moved into their folded positions, the table top **1** and the tabletop support **2** move arcuately downward to nest in vertical position in the cabinet **15** when the under portion of the table top **1** comes to rest against the stop **8**.

The nested table thus presents a compact cabinet structure which may, again, be opened to operative position by moving the table top **1** in arcuate direction upwards and outwards away from the vertical area of the cabinet **15**. This movement acts to extend the arms **6** and **7** away from the cabinet **15**, thus extending arms **4** and **5** into their support positions, as shown in the figures.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

I claim:

1. A nesting table comprising, a support, a table top pendulously attached to the top of said support for movement about a horizontal axis, means pivotally attached to the lower half of said support and forming with the portion of said support to which it is attached an articulated parallelogram, said means being swingable vertically relative to said support, support means integral with and extending vertically downward from the side of said articulated parallelogram opposite said support, said support means being of such length that when its free end is supported at the same level as the bottom of said support said first-mentioned means slopes upwardly from said support, an arm pivotally attached at one end to said table top remote from its pivotal attachment to said support and pivotally attached at its other end to said parallelogram along the side thereof remote from said support, whereby it defines an upwardly opening obtuse angle with the slope of said parallelogram when said end of said support means is supported at the same level as the bottom of said support.

2. A nesting table comprising, a support adapted to rest on a floor, a first pivot secured to the top of said support and defining a first horizontal axis, a second pivot and a third pivot secured to the lower half of said support and defining a second horizontal axis and a third horizontal axis, respectively, both of which are parallel to the first horizontal axis, the third horizontal axis being closer to the bottom of said support, a table top pendulously attached to said first pivot, a first arm attached at one end thereof to said second pivot, a second arm of equal length to said first arm secured at one end thereof to said third pivot, a supporting member, one end of said supporting

member being pivotally attached to the other end of said first arm, the other end of said second arm being pivotally attached to said supporting member intermediate the ends thereof, whereby said first and second arms are in parallel relationship at all pivotal positions thereof, and the portion of said supporting member between its pivotal attachment to said second arm and the other end thereof is vertical for all pivotal positions of said arms, the length of the last-mentioned portion of said supporting member being greater than the height of said third pivot above the bottom of said support, a third arm pivotally attached at one end thereof to said table top remote from said first pivot and pivotally attached at the other end thereof to said other end of said second arm, the length of said third arm being such that it defines an obtuse angle with said second arm when said other end of said supporting member is at the same level as the bottom of said support, whereby the pivotal attachment between said second arm, said third arm, and said supporting member need only be raised slightly to pass through straight line relationship with said third pivot and the pivotal attachment between said third arm and said table top to drop pendulously to substantially vertical position and whereby said table top is returned to substantially horizontal position by swinging said table top far enough about said first pivot to permit the free end of said supporting member to drop to the same level as the bottom of said support to be supported thereat for retaining said table top in a substantially horizontal position.

3. A nesting table comprising, a support adapted to rest on a floor, a first pivot secured to the top of said support and defining a first horizontal axis, a second pivot and a third pivot secured to the lower half of said support and defining a second horizontal axis and a third horizontal axis, respectively, both of which are parallel to the first horizontal axis, the third horizontal axis being closer to the bottom of said support and lying in a vertical plane that is between said first pivot and said second pivot, a table top pendulously attached to said first pivot, a first arm attached at one end thereof to said second pivot, a second arm of equal length to said first arm secured at one end thereof to said third pivot, a supporting member having a

first arm portion and a second arm portion in fixed relationship and defining an obtuse angle therebetween, the free end of the first arm portion being pivotally attached to the other end of said first arm, that portion of the supporting member at the apex of the obtuse angle being pivotally attached to the other end of said second arm, said first arm portion being of such length that said first and second arms are in parallel relationship for all pivotal positions thereof, the obtuse angle being such that said second arm portion is vertical for all positions of said supporting member, said second arm portion being of such length as to support said other ends of said first and second arms higher than said one end thereof when the free end thereof is supported at the same horizontal level as the bottom of said support, a third arm pivotally attached at one end thereof to said table top remote from said first pivot and pivotally attached at the other end thereof to said other end of said second arm to define an obtuse angle therewith when the free end of said second arm portion is supported at the same horizontal level as the bottom of said support and whereby the pivotal attachment between said second arm, said third arm, and said supporting member need only be raised slightly through straight line relationship with said third pivot and the pivoted attachment between said third arm and said table top to permit said table top to drop pendulously to substantially vertical position and whereby said table top is returned to substantially horizontal position by swinging said table top far enough about said first pivot to permit the free end of said second arm portion to drop to the same level as the bottom of said support.

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