Sept. 7, 1937. J. S. KNECHTEL 2,092,280

EXTENSION TABLE

Filed March 16, 1936 2 Sheets-Sheet 1

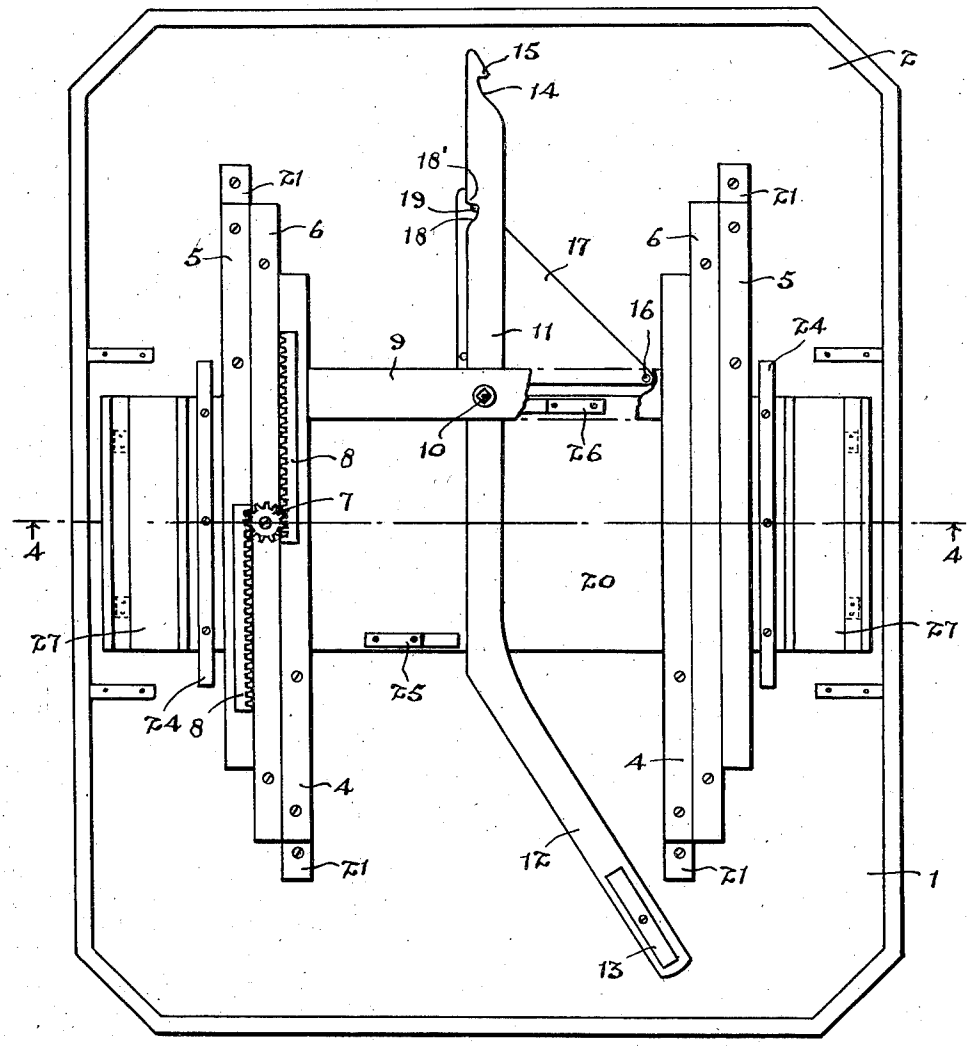


Fig. 1.

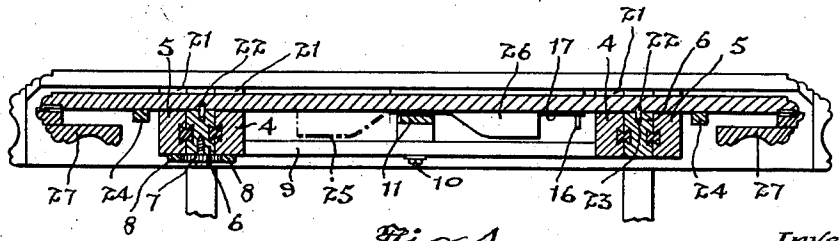


Fig. 4.

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EXTENSION TABLE

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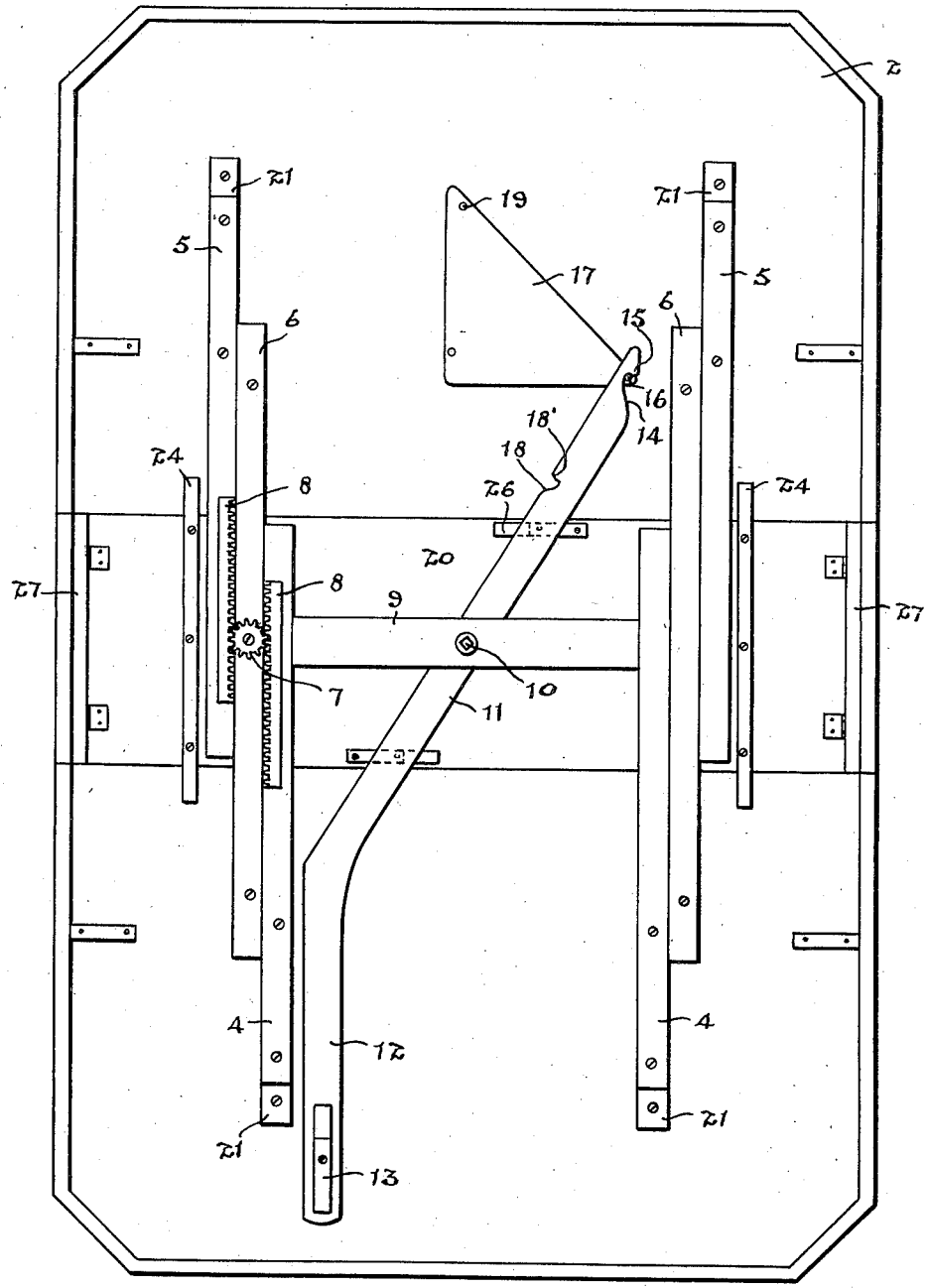


Fig. 2.

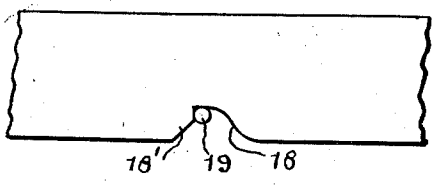


Fig. 3.

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UNITED STATES PATENT OFFICE

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EXTENSION TABLE

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Application March 16, 1936, Serial No. 69,122

7 Claims. (Cl. 311—51)

The principal objects of this invention are to provide an extension table which may be very easy to operate by a single person without assistance and to devise a construction of extremely simple form which will operate very smoothly and without noise and will be inexpensive to manufacture and very dependable.

A further and very important object is to provide a structure in which the separable sections may be securely locked in both the closed and extended positions in a vary simple manner.

The principal features of the invention consist in combining with a lever arm for raising and lowering an extension leaf between the extension sections of a table, a positive means for locking the movable section in both the closed and extended positions.

In the accompanying drawings, Figure 1 is an underside plan view of my improved table top showing the positions of the parts when the table is in its closed or smallest form.

Figure 2 is an underside plan view of the table top when in the extended position.

Figure 3 is an enlarged plan detail showing the means for locking the table sections in both positions.

Figure 4 is a cross sectional view through the line 4—4 of Figure 2.

In the manufacturing of extension tables it has been proposed to provide a centre leaf which will rest below the table top when the table is in its closed or smallest position and which when the table sections are drawn apart, may be lifted to a position level with the table top.

It is extremely desirable that the manipulation of this extra leaf be accomplished from the end of the table and the present invention proposes a structure by which this object may be accomplished.

In the structure herein shown the top is formed of two movable sections 1 and 2 which are preferably formed with moulded hinged side rails 3. The sections 1 and 2 are connected together by the usual form of slide bars, the inner pair 4 being secured to the section 1, the outer pair 5 being secured to the section 2 and the centre pair 6 floating between the other two.

A pinion 7 is journalled centrally on one of the centre slide bars and meshes with the racks 8 mounted on the adjacent inner and outer bars 4 and 5. This is the ordinary type of equalizer in extension tables, but it will be noted that only one of these is required on account of the drawing or tightening action of the locking device hereinafter described.

A bar 9 extends between the ends of the inner pair of slide bars 4 which extend under the section 2. Mounted centrally on the upper side of the bar 9 and pivoting on a bolt 10 is a bar 11 preferably formed of hardwood and having its end, extending toward the outward end of the table top section 1, offset at an obtuse angle. This offset portion 12 is preferably provided with a hand grip member 13 fastened to the under side.

The opposite end of the bar 11 is formed with one side edge bevelled toward the end, and the bevelled portion is provided with a notch 14, the short edge 15 of which is preferably bevelled at the outward corner as illustrated in Figure 3. This bevelled corner is adapted to engage a pin 16 secured in a block 17 fastened on the underside of the table section 2. The pin is round and presents a rounded surface to the bevelled face of the notch 15, so that a slight pressure exerted at the handle end of the bar 11 will cause the beveled corner of the notch to first exert a drawing action on the pin to draw the meeting edges of the table sections with the leaf snugly together and then securely lock said sections when the pin slips into the bottom of the notch. This arrangement of the pin and "drawing" notch eliminates the necessity of having "equalizers" on both sets of slide bars.

A notch 18 is cut on the oppostie side of the bar 11 to that in which the notch 14 is arranged, and it is spaced inwardly from the notch 14 a distance equal to half the width of the leaf, and is adapted to engage and interlock with a pin 19 secured in the block 17 at a point near to the outer end of the table top section 2. The short edge 18' of this notch is also bevelled similar to that of the notch 14 and serves to draw the meeting edges of the table top sections together when the leaf is depressed.

It will be noted that the bar 11 engages the pin 16 when the handle portion thereof is swung to the extreme position in one direction and the notch 18 engages the pin 19 when the handle member of the bar is swung the full movement to the other side.

When the table is in the closed position, a table leaf 20 rests on top of the slide bars 4, 5 and 6 in a recess formed between the risers 21, which are securely fastened to the underside of the top sections and support the slide bars 4 and 5. This leaf 20 is held in a central position between the top sections by a pin 22 extending loosely into a hole 23 in the center slide bar 6.

Buffer strips 24 are arranged on the underside

of the leaf to prevent it being raised beyond a level with the table sections, these buffer strips overlapping the underside of the adjacent edges of the separated sections.

The leaf 20 has secured to its underside a pair of blocks 25 and 26 formed with their inwardly extending ends bevelled, so that upon the swinging of the bar 11 on its pivot on one direction, it will engage these bevelled ends and lift the leaf. This operation is accomplished when the table top sections have been first drawn apart and the leaf is then raised into position between the adjacent ends of the sections.

When the leaf has been raised to a position between the two sections, the sections are moved into place by pushing against one end to engage the usual dowels for positioning the leaf and a slightly further movement brings the notched end of the bar 11 into transverse alignment with the pin 16 and by a slight swinging movement of the bar 11 the bevelled edge of the notch 15 draws the pin tightly into position and locks the table sections securely from separation.

Side rail sections or aprons 27 are hinged on the ends of the leaf 20 to be swung outwardly into vertical positions when the leaf has been lifted to the raised position.

When it is desired to reduce the size of the table, the bar 11 is swung so as to release the lock pin 16 from engagement with the notch 15. The sections are then pulled slightly apart and the movement of the bar 11 is completed, allowing the leaf to drop. The end sections 1 and 2 are then pushed together over the lowered leaf until the edges come into contact, and when this position is achieved, the arm 11 is swung so as to bring it into contact with the pin 19 and the bevelled edge of the notch 18 engaging this pin, draws the sections tightly together and locks them securely.

It will be readily understood that this table may be easily manipulated by a person who is alone, as the hand block or grip 13 on the underside of the bar 11 enables the person while standing at the end of the table to swing the bar quite readily to first unlock the sections by withdrawing the notched portion of the bar clear of the pin 19. The sections are then pulled apart, the equalizer holding them in their proper relation. A further movement of the bar 11 then engages the same with the bevelled blocks on the underside of the leaf, lifting the leaf upwardly until the buffer bars engage the underside of the top, then the table ends are pushed together and a further movement of the bar 11 brings the notch 14 into locking engagement with the pin 16 and the table is securely locked in an extended position.

It will be understood that the parts required in the manufacture of a table such as described are of very simple formation. They may be constructed at a very moderate cost and when in position are strong and rugged and will resist all ordinary wear and tear.

What I claim as my invention is:—

1. In an extension table, the combination with a pair of table tops mounted upon an extension slide, and a leaf housed beneath the movable members of the table top, of a lever pivotally mounted on one of said table tops and movable in one direction to raise said leaf and in the opposite direction to lower same, and means secured to the other of said table tops co-operative with said lever at the end of its movement in each of said directions to lock said pair of table tops selectively in extended or non-extended relation.

2. In an extension table, the combination with a pair of separable table tops mounted upon extension slides, a leaf member housed beneath the table top and movable vertically, and a lever pivotally mounted on one of said tops and adapted to raise and lower said leaf, of members rigidly secured to the underside of the table top which does not carry the lever, and means on one side of said lever adapted to engage one of said rigid members to lock the table in the closed position and on the other side of said lever to engage the other of said members to lock the table in its extended position.

3. In an extension table, the combination with a pair of table tops mounted upon extension slides and a leaf housed beneath the table top and adapted to be placed therebetween when said tops are moved apart, of a lever pivotally mounted on one of said table tops to swing under said tops and having a notch on one side adjacent to one extremity and a notch on the other side farther from said extremity than the aforesaid notch, and locking members spaced apart on the underside of the other table top, said projections being adapted to be engaged by said notches upon the swinging of the lever to one side or to the other to tightly lock the table sections in their closed or their extended position.

4. In an extension table, the combination with a pair of table tops mounted upon extension slides and a leaf housed beneath the table top and adapted to be placed therebetween when said tops are moved apart, of a lever cooperatively associated with said leaf and pivotally mounted between the extension slides secured to one of the table tops, said lever having a notch on one side thereof arranged between said pivot and one extremity of the lever, said notch having a bevelled short edge, said lever also having a notch on the opposite side adjacent to said extremity, the shorter edge of which is bevelled, and a pair of pins carried by the underside of the other table top, said pins being spaced either side of the lever and adapted by the swinging of the lever to be brought into engagement selectively with the bevelled short edges of the lever to lock the table top in extended or closed relation respectively.

5. In an extension table the combination with a pair of table tops mounted upon extension slides and a leaf housed beneath the movable members of the table top, of a lever pivotally supported midway between the extension slides of one of the table tops and adapted to raise and lower said leaf, said lever having an offset handle portion at one end and having at the other end a pair of notches, one arranged on either side, said notches being spaced apart longitudinally, and spaced pins mounted on the underside of the other of said table tops, said pins being adapted to enter said notches separately to lock the table tops securely from separation in their closed position and to lock them securely in their separated position.

6. In an extension table having a pair of extensible table sections each having a top mounted thereon adapted when extended to accommodate a leaf therebetween, means for locking said sections in extended and non-extended relation including a member mounted solely on one of said sections and displaceable in one direction into locking relation with the other section to lock the respective sections extended, and displaceable in a different direction into a second

locking relation with said other section to lock the respective sections in non-extended relation.

7. In an extension table, the combination with a pair of slidably separable table sections having tops mounted thereon, a leaf housed beneath the movable members of the table top, and a lever pivotally connected with one of said table sections and displaceable bodily therewith relative to the other section on the separating and closing of the sliding sections, said lever having an operating extension underlying the top of the section to which it is connected and readily available for operation at the adjacent end of the table, said lever being movable in one direction to raise said leaf, of means co-operatively interposed between said lever and the other of said respective table sections co-operative at the end of the movement of the lever in each of said directions to lock said pair of table tops selectively in extended or non-extended relation.

JACOB S. KNECHTEL.