

Sept. 16, 1958

F. G. FOSNAUGH

2,852,325

EXTENSION TABLE

Filed Sept. 20, 1957

3 Sheets-Sheet 1

Fig. 1.

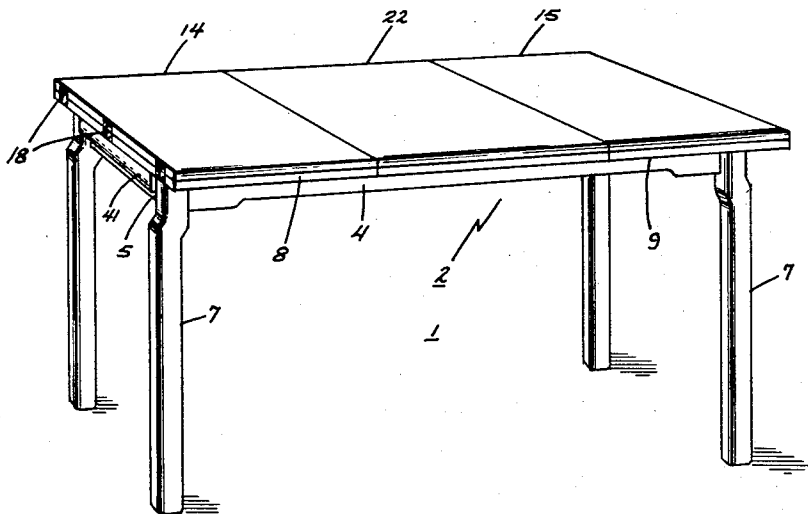
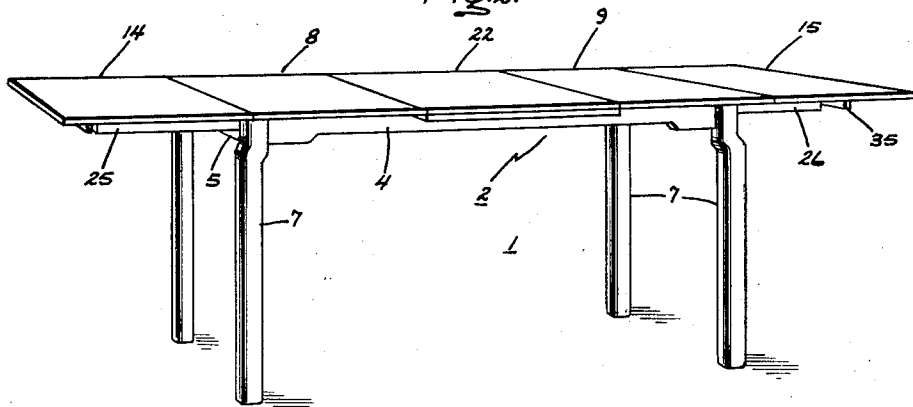


Fig. 2.



Inventor:
Frederick G. Fosnaugh,
by *Gust & Drisk*
Attorney.

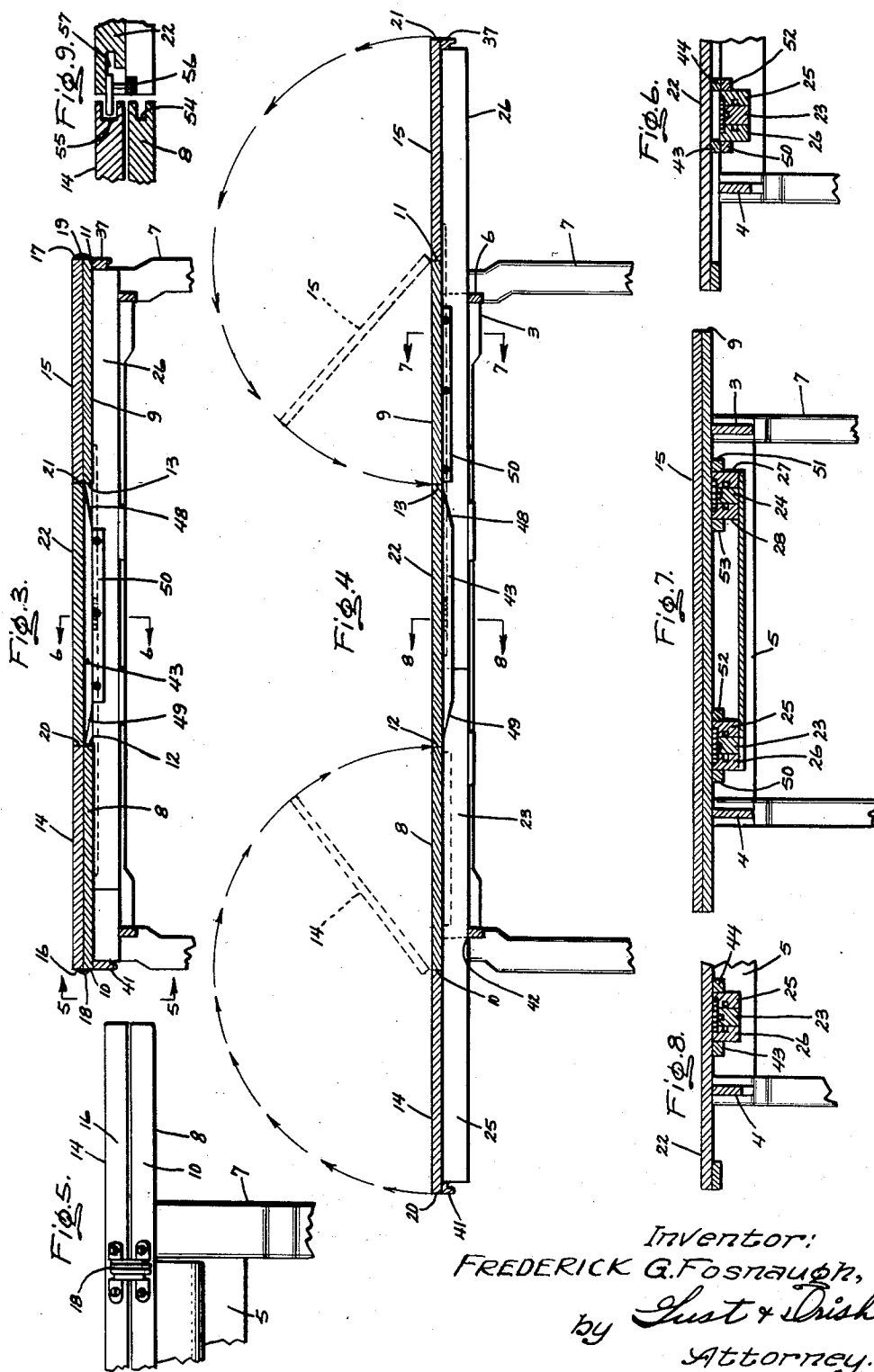
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F. G. FOSNAUGH
EXTENSION TABLE

2,852,325

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3 Sheets-Sheet 2



Inventor:
FREDERICK G. Fosnaugh,
by *Just & Irish*
Attorney.

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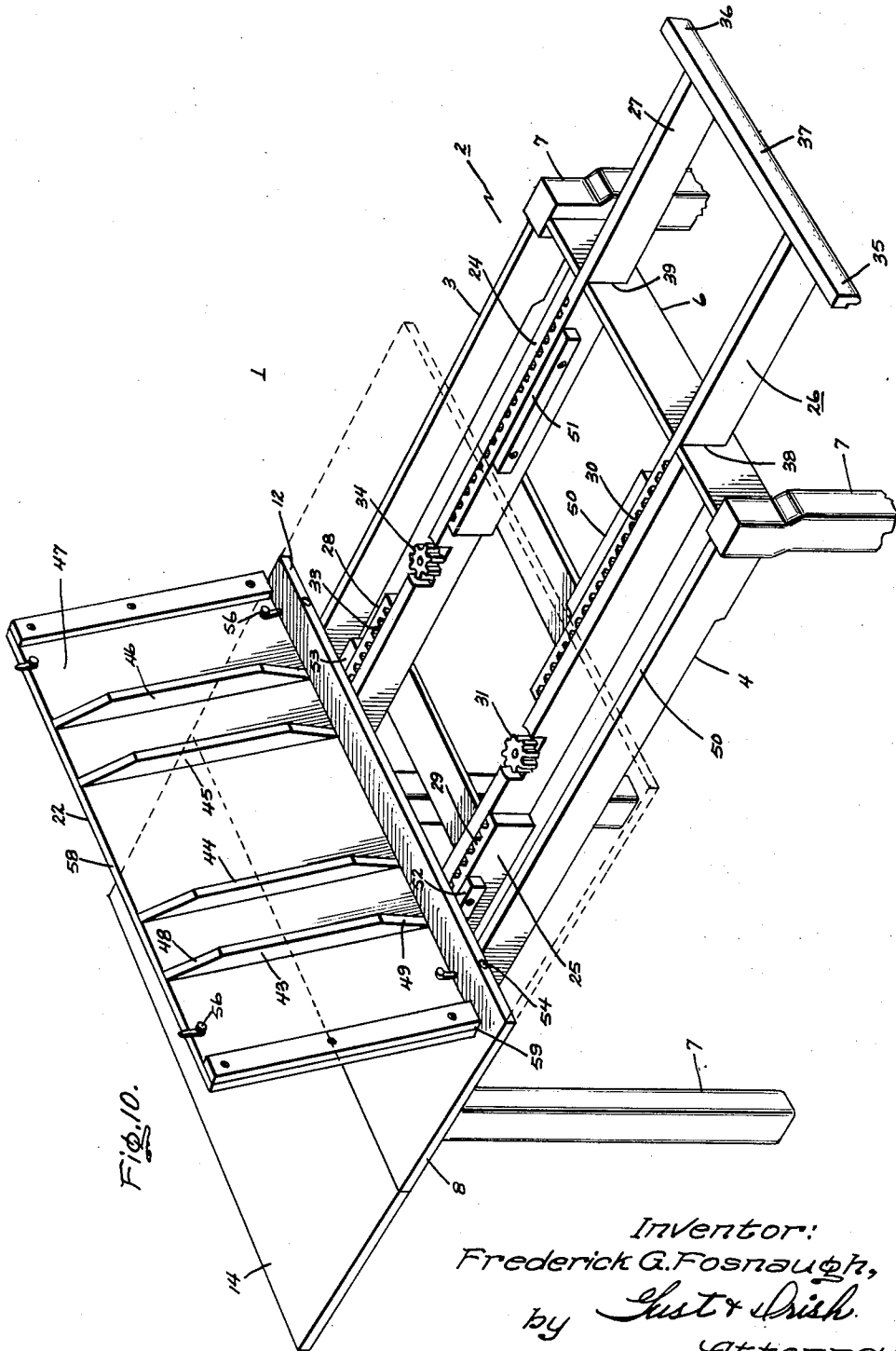
F. G. FOSNAUGH

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EXTENSION TABLE

Filed Sept. 20, 1957

3 Sheets-Sheet 3



Inventor:
Frederick G. Fosnaugh,
by *Gust & Irish*
Attorney.

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2,852,325

EXTENSION TABLE

Frederick G. Fosnaugh, Geneva, Ind., assignor to Dunbar Furniture Corporation of Indiana, Berne, Ind., a corporation of Indiana

Application September 20, 1957, Serial No. 685,247

14 Claims. (Cl. 311—67)

This invention relates to extension tables and more particularly to a table which may be extended without requiring the use of removable leaves.

Tables which may be extended in length by the insertion of one or more removable leaves are well known in the art, however, such tables involve a disadvantage in that provision must be made for storing the removable leaves when they are not in use and further the leaves must be manually inserted and removed. Tables which can be extended in size by means of folding or drop leaves are also well known in the art, however, tables of this type known to the applicant have either been of relatively small size, or have incorporated overly complex mechanisms.

It is accordingly an object of my invention to provide an improved extension table which does not employ removable leaves.

Another object of my invention is to provide an improved extension table of the folding-leaf type.

A further object of my invention is to provide an improved extension table of the folding-leaf type which may be larger than prior folding-leaf extension tables.

Yet another object of my invention is to provide an improved extension table of the folding leaf type characterized by its simple extension mechanism.

Further objects and advantages of my invention will become apparent by reference to the following description and the accompanying drawing, and the features of novelty which characterize this invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

My invention in its broader aspects provides an extension table having a frame with a fixed top leaf secured thereto and with a folding top leaf the same size as the fixed leaf and having a transverse edge hinged to a transverse edge of the fixed leaf, the folding leaf having a first position folded on top of the fixed leaf and a second position folded outwardly and flush with the fixed leaf. A vertically movable floating leaf is also provided having a first upper position in which it is flush with the folding leaf in its first position and a second lower position in which it is flush with the fixed leaf. In the preferred embodiment of my invention, a pair of longitudinally spaced-apart fixed top leaves are provided respectively secured to the frame and a pair of folding top leaves are provided respectively the same size as the fixed leaves and respectively having transverse edges hinged to the remote transverse edges of the fixed leaves. The floating top leaf has a first upper position intermediate and flush with the folding leaves in their first position and a second lower position intermediate and flush with the fixed top leaves. The floating top leaf is provided with longitudinally extending cleats secured on its bottom surface, these cleats respectively having cam surfaces formed on each end thereof. Longitudinally extending slide members are provided respectively longitudinally movable between first inner positions and second outer positions.

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These slide members respectively cooperate with the cam surfaces of the cleats on the bottom of the floating leaf so that movement of the slide members from their second to their first or inner positions respectively elevate the floating leaf to its first position flush with the folding leaves in their respective first or folded positions, and movement of the slide members to their second or outward positions permits the floating leaf to drop to its second position flush with the fixed leaves; the slide members in their second or outward positions respectively provide supports for the folding leaves in their second or outwardly folded positions.

In the drawing,

Fig. 1 is a view in perspective showing my improved extension table with the folding leaves folded on top of the fixed leaves and with the floating leaf flush with the folding leaves;

Fig. 2 is a perspective view of the table of Fig. 1 with the folding leaves folded outwardly and with the floating leaf flush with the fixed leaves;

Fig. 3 is a fragmentary cross-sectional view of my improved table as seen in Fig. 1;

Fig. 4 is a fragmentary cross-sectional view of my improved table as seen in Fig. 2;

Fig. 5 is a fragmentary end view of my table as viewed along the line 5—5 of Fig. 3;

Fig. 6 is a fragmentary cross-sectional view taken along the line 6—6 of Fig. 3;

Fig. 7 is a fragmentary cross-sectional view taken along the line 7—7 of Fig. 4;

Fig. 8 is a fragmentary cross-sectional view taken along the line 8—8 of Fig. 4;

Fig. 9 is a fragmentary cross-sectional view illustrating the locking bolt assembly of the floating leaf of my improved extension table; and

Fig. 10 is a fragmentary perspective view, partly broken away, further illustrating the construction of my improved extension table.

Referring now to the drawings, my improved extension table, generally identified as 1, includes a frame structure 2 having side rails 3 and 4 and end rails 5 and 6 with supporting legs 7. Fixed top leaves 8 and 9 are secured to the top edges of side and end 3 and 6 in any suitable manner with their remote transverse edges 10 and 11 respectively extending slightly beyond the end rails 5 and 6 and their adjacent transverse edges 12 and 13 being spaced apart as shown.

A pair of folding top leaves 14 and 15 are provided respectively having their remote transverse edges 16 and 17 hinged to the transverse edges 10 and 11 of fixed top leaves 8 and 9 by suitable hinges 18 and 19 respectively. Folding top leaves 14 and 15 are the same size and configuration as the fixed top leaves 8 and 9 and respectively have first folded positions in which they rest on top of the fixed top leaves 8 and 9, as best seen in Figs. 1 and 3. The folding top leaves 14 and 15 further have second extended positions in which they are folded or pivoted outwardly by means of hinges 18 and 19 respectively so that they are flush with the fixed top leaves 8 and 9, as best seen in Figs. 2 and 4. It will further be seen that when the folding top leaves 14 and 15 are in their first folded positions on top of the fixed top leaves 8 and 9, their adjacent transverse edges 20 and 21 respectively are spaced apart by a distance equal to the spacing of the transverse edges 12 and 13 of fixed top leaves 8 and 9.

A vertically movable floating top leaf 22 is provided having a first upper position flush with folding top leaves 14 and 15 in their first folded position, as best seen in Figs. 1 and 3, and having a second lower position flush with the fixed top leaves 8 and 9, as best seen in Figs. 2 and 4. It will be seen that the floating top leaf 22 sub-

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stantially fills the space defined by the adjacent transverse edges 12 and 13 of fixed top leaves 8 and 9, and 20 and 21 of folding top leaves 14 and 15, respectively.

In order to provide for raising and lowering floating top leaf 22, the frame structure 2 of my improved extension table 1 includes a pair of transversely spaced apart longitudinal rails 23 and 24 extending respectively between end rails 5 and 6. A pair of equalizing slides 25 and 26 are respectively arranged on either side of longitudinal rail 23 and another pair of equalizing slides 27 and 28 are respectively arranged on either side of the longitudinal rail 24. Equalizing slides 25 and 26 are respectively provided with conventional racks 29 and 30 which are mutually engaged by gear 31 rotatably mounted on longitudinal rail 23; inward movement of one of the equalizing slides, for example, 26, thus causes corresponding inward movement of the other equalizing slide 25 and vice versa. The other pair of equalizing slides 27 and 28 likewise are respectively provided with conventional racks 32 and 33 cooperating with gear 34 mounted on longitudinal rail 24. Equalizing slides 26 and 27 are joined together at their outer ends 35 and 36 by an end member 37 and it will be seen that slides respectively extend through suitable slots 38 and 39 in the end rail 6. The other equalizing slides 25 and 28 have their ends 40 joined by member 41 and respectively extend through corresponding slots 42 in end rail 5. It will thus be seen that the corresponding equalizing slides 26 and 27, and 25 and 28 respectively at opposite ends of the table are longitudinally movable between first inner positions, as shown, in Fig. 3, and second outer or extended positions as best seen in Figs. 4 and 10.

Floating top leaf 22 is provided with cleats 43, 44, 45 and 46 secured to its bottom surface 47 in any suitable manner, as by screws, the cleats 43—46 respectively having cam surfaces 48 and 49 formed at each end thereof. The equalizing slides 26 and 27 and 25 and 28 have cleats 50, 51, 52 and 53 respectively secured on the sides thereof in any suitable manner, as by screws, the cleats 50, 52, 53 and 51 respectively being in alignment with the cammed cleats 43, 44, 45 and 46 secured to the bottom surface 47 of the floating leaf 22. Inspection of Figs. 3 and 4 will now reveal that the cleats 50—53 respectively on the slides 26 and 27, and 25 and 28 respectively cooperate with the cammed cleats 43—47 on the floating leaf 22 so that the floating leaf 22 is elevated to its first or upper position when the equalizing slides are in their first or inner positions as shown in Fig. 3, and the floating leaf 22 is lowered to its second or lower position when the equalizing slides are moved to their outer or extended position as shown in Fig. 4. It will readily be seen that movement of the equalizer slides 26, 27 and 25 and 28 from their second or extended positions as shown in Fig. 4 toward their first or inner positions, as shown in Fig. 3, causes the cleats 50—53 respectively to engage the cammed surfaces 48 and 49 of cleats 43—46 thereby causing the floating leaf 22 to be elevated to its upper position as shown in Fig. 3, and likewise, movement of the equalizing slides 26, 27, 25 and 28 toward their second or extended positions, as shown in Fig. 4, causes the cleats 50—53 to become disengaged from the cleats 43—46 of the floating leaf 22 thereby permitting the floating leaf to drop to its second position flush with the fixed leaves 8 and 9 as shown in Fig. 4. It will further be seen that the outer portions of the equalizing slides 26, 27 and 25, 28 respectively adjacent the end members 37 and 41 respectively support the folding leaves 14 and 15 in their extended or outwardly folded positions as shown in Figs. 2 and 4.

In order to lock the floating leaf 22 in either its first position as shown in Fig. 3, or its second position as shown in Fig. 4, transverse edges 12 and 13 of fixed leaves 8 and 9 and transverse edges 20 and 21 of fold-

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ing leaves 14 and 15 may respectively be provided with openings or holes 54 and 55, as seen in Figs. 9 and 10, which cooperate with bolts 56 slidably mounted in the transverse edges 53 and 59 of floating leaf 22.

It will now be readily apparent that I have provided an extension table of the folding-leaf variety which may be considerably larger than conventional folding-leaf tables and which eliminates removable leaves. It will also be readily apparent that the extension mechanism of my improved table is characterized by its simplicity as compared with prior extension mechanisms; the simple and foolproof extension mechanism of my improved extension table permits the length of the table to be longitudinally extended by a substantial amount without the necessity for manually inserting and removing removable leaves.

While I have illustrated and described a preferred embodiment of this invention, modifications and improvements will occur to those skilled in the art and I desire that it be understood therefore that this invention is not limited to the specific form shown and I intend in the appended claims to cover all modifications which do not depart from the spirit and scope of this invention.

What is claimed is:

1. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; and a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof.

2. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; and means for selectively moving said movable leaf from said second to said first position thereof.

3. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; and means for selectively moving said movable leaf from said second to said first position thereof and for supporting said folding leaf in said second position thereof.

4. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf of the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; and means for respectively locking said movable leaf to said folding and fixed leaves.

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5. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; said movable leaf having means forming a cam surface formed on the bottom surface thereof; and a slide member longitudinally movable between first and second positions and having means adjacent one end thereof forming a cam surface, movement of said slide means to said first position thereof causing cooperative engagement of said cam surfaces thereby to elevate said movable leaf to said first position thereof, movement of said slide member to said second position causing disengagement of said cam surfaces thereby lowering said movable leaf to said second position thereof, said slide in the second position thereof having its other end supporting said folding leaf in said second position thereof.

6. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; and slide means having a first position with a portion thereof supporting said movable leaf in said first position thereof and a second position supporting said folding leaf in said second position thereof and permitting said movable leaf to drop to said second position thereof.

7. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; said movable leaf having cam means formed on the bottom surface thereof; and slide means having a first position with a portion thereof in cooperative engagement with said cam means to support said movable leaf in said first position thereof, said slide means having a second position supporting said folding leaf in said second position thereof and with said portion out of engagement with said cam means thereby permitting said movable leaf to drop to said second position thereof.

8. An extension table comprising: frame means; a fixed top leaf secured to said frame means; a folding top leaf the same size as said fixed leaf and having a transverse edge hinged to a transverse edge of said fixed leaf, said folding leaf having a first position folded on top of said fixed leaf and a second position folded outwardly and flush with said fixed leaf; said movable leaf having cam means formed on the bottom surface thereof; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; and slide means slidably mounted on said frame means for movement between a first position and a second position, said slide means in said first position thereof having a portion in cooperative engagement with said cam means to support said movable leaf in said first position thereof, said slide means in said second position thereof supporting said folding leaf in said second position there-

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of and with said portion out of engagement with said cam means thereby permitting said movable leaf to drop to said second position thereof.

9. An extension table comprising: a frame having side and end rails with legs attached thereto; a fixed top leaf secured to the upper edges of said side and end rails; a folding top leaf the same size as said fixed top leaf and having a first transverse edge hinged to the transverse edge of said fixed top leaf adjacent one of said end rails, said folding top leaf having a first position folded on top of said fixed top leaf; a vertically movable floating top leaf having a first upper position flush with said folding top leaf and a second lower position flush with said fixed top leaf when said folding top leaf is in said second position thereof, said movable top leaf in its first and second positions having a transverse edge respectively abutting the other transverse edges of said folding and fixed top leaves; said movable top leaf having a first cleat member with a cam edge on its bottom surface; and a slide member mounted in an opening in said one end rail for longitudinal movement between first and second positions; said slide member having a second cleat member secured thereto adjacent one end thereof; said slide member in said first position having said second cleat member in cooperative engagement with said first cleat member thereby supporting said movable top leaf in said first position thereof; movement of said slide member toward said second position thereby causing said second cleat member to move out of engagement with said first cleat member thereby permitting said movable top leaf to drop to said second position thereof; said slide in said second position thereof having its other end supporting said folding leaf in said second position thereof.

10. The table of claim 9 in which: said folding and fixed top leaves each have an opening in said other transverse edge thereof, said opening being vertically aligned when said folding leaf is in said first position thereof; and said movable leaf having a selectively movable bolt mounted in said one transverse edge and respectively engageable with said openings in said folding and fixed top leaf transverse edge openings for selectively locking said movable leaf to said folding and fixed top leaves.

11. An extension table comprising: frame means; a pair of spaced-apart fixed top leaves secured to said frame means; a pair of folding top leaves respectively the same size as said fixed leaves and respectively having transverse edges hinged to the remote transverse edges of said fixed leaves, said folding leaves having first positions folded respectively on top of said fixed leaves and second positions folded outwardly and respectively flush with said fixed leaves; and a vertically movable floating top leaf having a first upper position intermediate and flush with said folding leaves in said first position thereof and a second lower position intermediate and flush with said fixed leaves when said folding leaves are in said second position.

12. An extension table comprising: frame means; a pair of spaced-apart fixed top leaves secured to said frame means; a pair of folding top leaves respectively the same size as said fixed leaves and respectively having transverse edges hinged to the remote transverse edges of said fixed leaves, said folding leaves having first positions folded respectively on top of said fixed leaves and second positions folded outwardly and respectively flush with said fixed leaves; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof, and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; and a pair of slide means respectively having first inner positions and second outer positions, said slide means in their first positions having portions supporting said movable leaf in said first position thereof, said slide means in their second positions respectively supporting said folding leaves in said second position and

permitting said movable leaf to drop to said second position thereof.

13. An extension table comprising: frame means; a pair of spaced-apart fixed top leaves secured to said frame means; a pair of folding top leaves respectively the same size as said fixed leaves and respectively having transverse edges hinged to the remote transverse edges of said fixed leaves, said folding leaves having first positions folded respectively on top of said fixed leaves and second positions folded outwardly and respectively flush with said fixed leaves; a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; said movable leaf having cam means formed on the bottom surface thereof; and a pair of slide means longitudinally movable between first inner positions and second outer positions, said slide means in their first position respectively having portions in cooperative engagement with said cam means to support said movable leaf in said first position thereof, said slide means in their outer positions respectively supporting said folding leaves in their second positions and having said portions out of engagement with said cam means thereby permitting said movable leaf to drop to said second position thereof.

14. An extension table comprising: a frame having side and end rails with legs attached thereto, said frame having a pair of transversely spaced-apart longitudinally extending rails extending between said end rails; a pair of longitudinally spaced-apart fixed top leaves secured to the upper edges of said side and end rails; a pair of folding top leaves respectively the same size as said fixed leaves and respectively having transverse edges hinged to the remote transverse edges of said fixed leaves, said folding leaves having first positions respectively on top of said fixed leaves and second positions folded outwardly and respectively flush with said fixed leaves; a vertically mov-

able floating top leaf having a first upper position intermediate and flush with said folding leaves in said first position thereof and a second lower position intermediate and flush with said fixed leaves, said movable leaf substantially filling the space respectively defined by said folding and fixed leaves, said movable leaf having four transverse spaced-apart longitudinally extending cleat members secured on its bottom surface, said cleat members respectively having cam surfaces formed at each end thereof; and two pairs of longitudinally extending equalizing slide members, the slide members of each pair being arranged respectively on opposite sides of a respective longitudinal rail, each of said slide members having a cleat member secured on a side of its inner end and having its outer end extending through an opening in a respective end rail, said slide members being longitudinally movable between first inner positions and second outer positions, movement of said slide members to said first positions causing cooperative engagement of said last-named cleat members with respective cam surfaces on said movable leaf cleat members thereby to elevate said movable leaf to said first position thereof, movement of said slide members to said second positions causing disengagement of said last-named cleat members from said cam surfaces thereby lowering said movable leaf to said second position thereof, said slides in their second positions respectively having their outer ends supporting said folding leaves in their second positions.

References Cited in the file of this patent

UNITED STATES PATENTS

451,597	Magnussan	May 5, 1891
556,387	Unger	Mar. 17, 1896
1,877,314	Herbert	Sept. 13, 1932
2,015,599	Lawrence	Sept. 24, 1935
2,153,262	McFall	Apr. 4, 1939
2,295,096	Teague	Sept. 8, 1942

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 2,852,325

September 16, 1958

Frederick G. Fosnaugh

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 5, line 7, after "leaf;" insert -- a vertically movable floating leaf having a first upper position flush with said folding leaf in said first position thereof and a second lower position flush with said fixed leaf when said folding leaf is in said second position thereof; --; lines 63 and 64, strike out "said movable leaf having cam means formed on the bottom surface thereof;" and insert the same after "thereof;", in line 69, same column.

Signed and sealed this 27th day of February 1962.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents