April 22, 1952 H. HOWE 2,594,262

DROP LEAF SUPPORT CONSTRUCTION FOR A TABLE OR THE LIKE

Filed March 2, 1950 2 SHEETS—SHEET 1

Fig. 1.

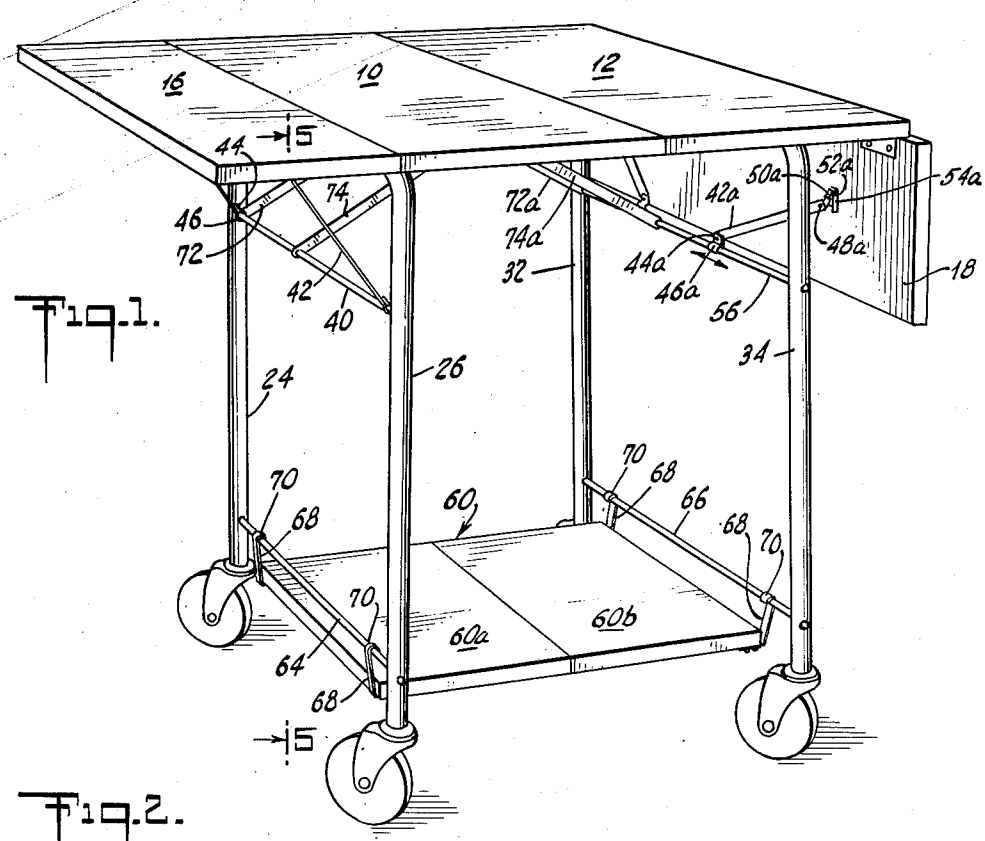


Fig. 2.

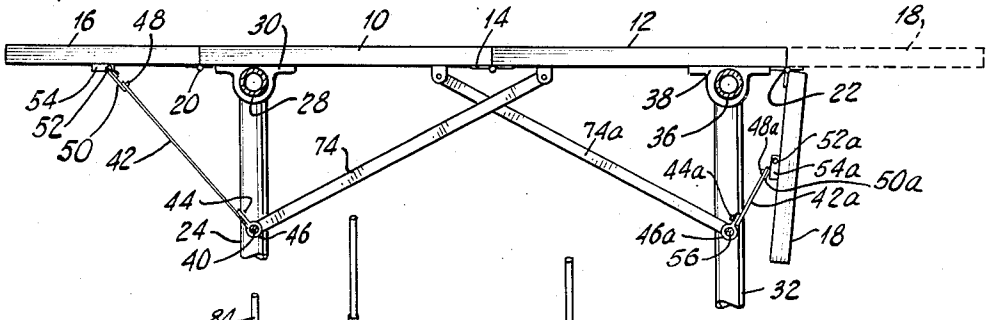
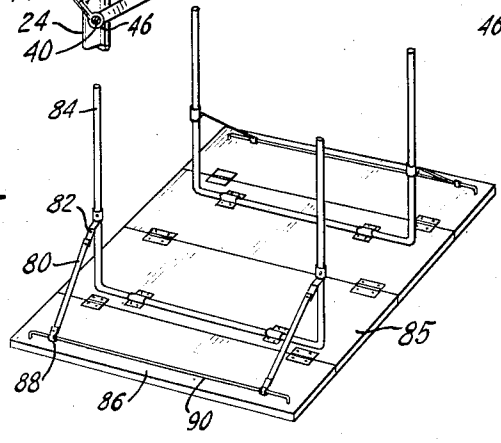


Fig. 7.



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Fig. 3.

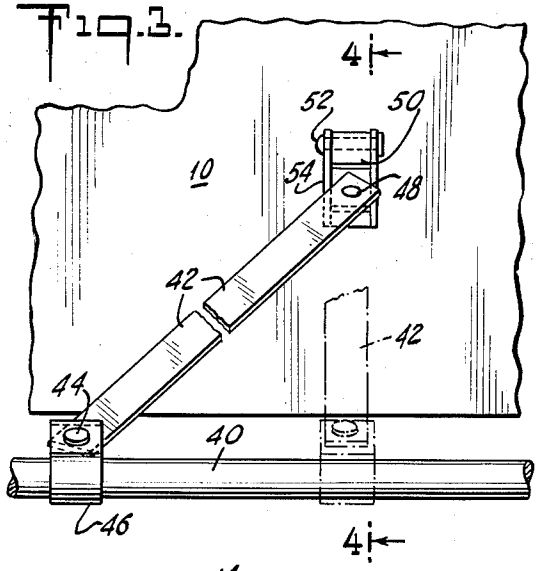


Fig. 4.

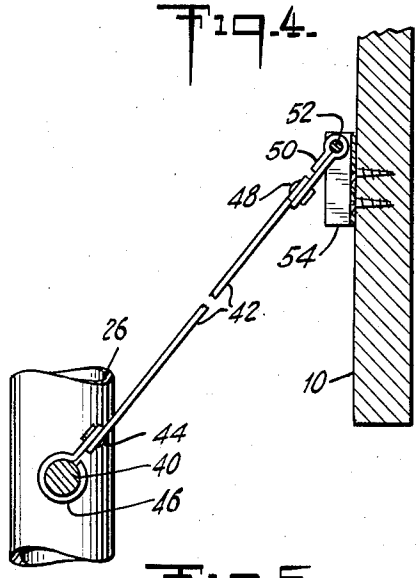


Fig. 6.

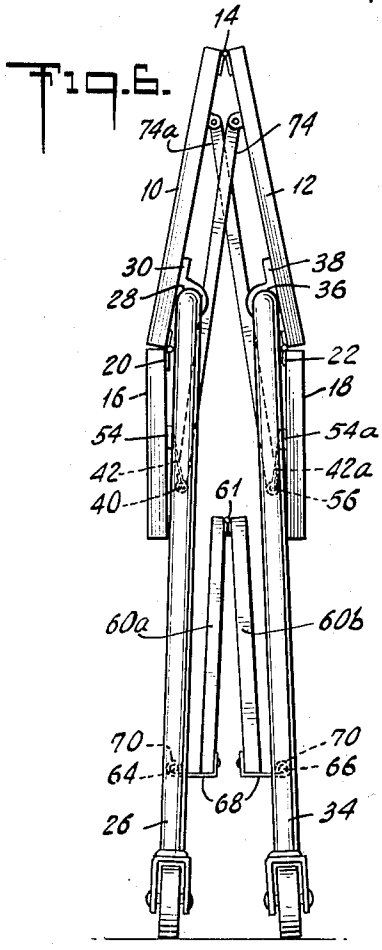
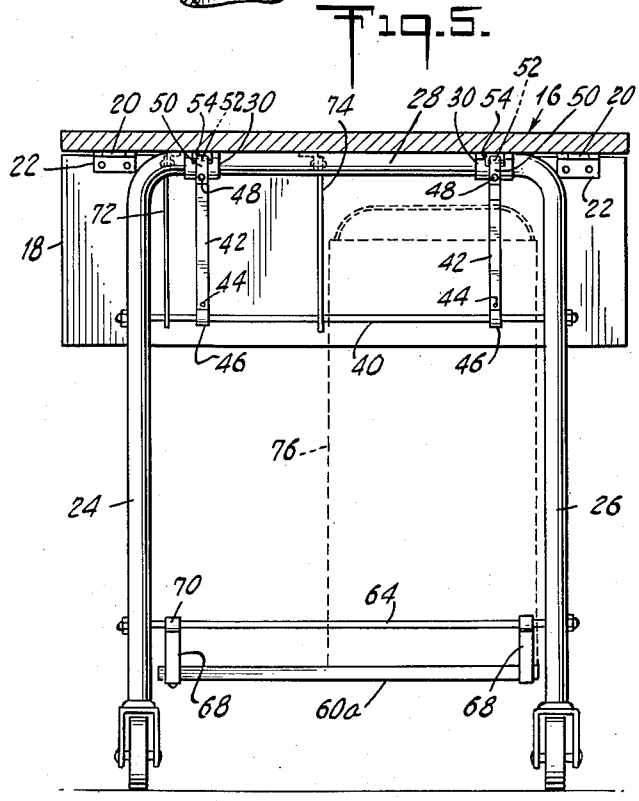


Fig. 5.



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DROP LEAF SUPPORT CONSTRUCTION FOR A TABLE OR THE LIKE

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Application March 2, 1950, Serial No. 147,235

3 Claims. (Cl. 311—62)

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This invention relates to a drop leaf support construction for a table or the like.

An object of the invention is to provide drop leaf support construction which also serves as a lock against accidental folding of the drop leaf.

Another object of the invention is to provide a simple, practical and effective drop leaf structure.

Other objects of the invention will be in part obvious or in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, arrangements of parts, and in the several steps and relation and order of each of said steps to one or more of the others thereof, all as will be pointed out in the following description, and the scope of the application of which will be indicated in the following claims.

The invention will best be understood if the following description is read in connection with the drawings, in which,

Figure 1 is a perspective view;

Figure 2 is a side elevation of the upper portion of the table shown in Figure 1;

Figure 3 is a detail view showing a form of mounting and connections of a brace member for a drop leaf;

Figure 4 is a detailed view on an enlarged scale looking along the line 4—4 of Figure 3 in the direction of the arrows;

Figure 5 is an end elevational view partly in cross section taken on the line 5—5 of Figure 1;

Figure 6 is an end view of the structure completely folded; and

Figure 7 is a perspective view showing modified drop leaf supporting means.

In the embodiment of the invention disclosed herein a table structure is shown comprising a top or supporting surface divided into four portions including, the main or body portion divided into two halves 10 and 12 connected together by hinges 14, and the two drop leaves 16 and 18 hingedly connected to the portions 10 and 12 respectively by the hinges 20 and 22 respectively. If desired, the invention can be usefully applied to a table employing only a single drop leaf.

The table top portions 10 and 12 are respectively mounted on support means by pivotal connecting means so that the support means for each table top half is movable from an unfolded position in which it is substantially normal to the table top half to a folded position in which it is substantially parallel with the table top half. As shown herein the support means for the support surface 10 comprises the legs 24 and 26

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joined together at the top by the cross member 28. The legs 24 and 26 and the cross member 28 comprise an integral U-shaped member. The cross member 28 is rotatably mounted on the under side of support surface 10 by the brackets 30 in which the cross member 28 is rotatably received thus making it possible for the legs to rotate from a position substantially normal to the surface 10 to a position substantially parallel to it.

Support surface portion 12 is similarly supported on legs 32 and 34 connected by the cross member 36, which is pivoted to the under side of surface 12 by the brackets 38.

Extending between the legs 24 and 26, below the cross member 28, is a cross rod 40. Between said rod 40 and the under surface of drop leaf 16, brace means, preferably a pair of braces, are provided. Each such brace means comprises a rigid member 42 connected at its lower end by pivot 44 to an eye 46 which is slipped over rod 40 and is rotatable around rod 40 and slideable lengthwise on rod 40. The pivot 44 extends in a plane at right angles to rod 40.

Connected at the other end of rigid brace member 42 by pivot 48 is a link 50 which in turn is pivotally connected by pivot 52 to a bracket 54 secured to the under side of drop leaf 16. Pivots 48 and 52 are normal to one another thus permitting relative movement between the drop leaf and brace member 42 either laterally or longitudinally of surface 16.

Similarly between legs 32 and 34 a cross rod 56 is provided below cross member 36. Between said rod 56 and the under surface of drop leaf 18, brace means, preferably a pair of braces, are provided. These brace means are similar to those described above in connection with the rod 40 each comprising a rigid member 42^a connected at its lower end by a pivot 44^a to an eye 46^a which is slipped over rod 56 and is rotatable around rod 56 and slideable lengthwise on rod 56. The pivot 44^a extends in a plane at right angles to rod 56. Connected at the other end of rigid brace member 42^a by pivot 48^a is a link 50^a which in turn is connected by a pivot 52^a to a bracket 54^a secured to the under side of drop leaf 18. Pivots 48^a and 52^a are normal to one another thus permitting relative movement between the drop leaf and brace member 42^a either laterally or longitudinally of the surface 18.

When the top portions 10 and 12 are in abutting, unfolded position, with the drop leaves 16 and 18 hanging down, the eyes 46 and 46^a of brace members 42 and 42^a respectively will have

moved toward one another on rods 40 and 56 respectively said brace members thus approaching a parallel relation to said rods, whereas when the drop leaves are in elevated position, in alignment with the table top portions 10 and 12, the said brace members 42 and 42a will extend substantially at right angles to said rods 40 and 56 respectively. When a drop leaf is raised the eyes 46 and 46a of its brace means will automatically slide outwardly on its rod thus moving the brace means from a position approaching parallel relation to the rod to a position at right angles to the rod. In this position each brace means acts as a lock, not only supporting its drop leaf but also keeping the table top portions 10 and 12 in abutting relation and preventing folding of the table top until inward movement of eyes 46 and 46a on their rods respectively is initiated positively.

When the table is folded the eyes 46 and 46a of the brace members slide inwardly along said rods 40 and 56 respectively until brace members 42 and 42a are substantially parallel with said rods 40 and 56 respectively when the table is completely folded as illustrated in Figure 6.

In the embodiment of the invention shown in Figure 1 a shelf 60 is provided between the legs supporting the table top and comprising two halves 60a and 60b hinged together by hinge means 61 (Figure 6) along their inner edges for folding in unison with folding of the table top, and in the same direction of fold. A cross bar 64 is shown between the legs 24 and 26 supporting surface portion 10, and a cross bar 66 is shown between the legs 32 and 34 supporting the table top portion 12, and the shelf 60 is supported from said cross bars by means of hangers 68 secured to the shelf preferably at its corners, said hangers 68 having eyes 70 at their upper ends slipped over said cross bars 64 and 36 thus making the shelf halves 60a and 60b rotatable on said bars 64 and 66 respectively for folding and unfolding.

In Figures 1, 2 and 3 brace members 72 and 74 are shown extending between cross rod 40 and the under surface of table top portion 12. Similarly braces 72a and 74a are shown extending between cross rod 56 and the under surface of table top portion 10. These braces are provided at either end with pivotal connections for folding of the table structure. This arrangement and mounting of braces 74 and 74a results in the transmission to both top portions 10 and 12 of folding force exerted on either top portion or its support means 24—28 or 32—36. For many uses the said braces 72 and 74, 72a and 74a will suffice to position the support means for the table top, without the aid of the drop leaf braces 42 and 42a or shelf 60, but both the braces 42 and 42a and the shelf 60 coact with braces 72—74 and 72a—74a to provide a folding table having strength and rigidity when unfolded, well adapted for example for transporting food.

An advantage of the structure disclosed herein lies in the fact that the brace means 42 and 42a (Figures 1–6) and 80 (Figure 7) which support the drop leaves are mounted and movable in such a way that they do not project into the space under the unfolded table top even when one or both drop leaves are down. In the embodiment of the invention illustrated in Figure 5 this fact is availed of to provide a space under the table top so that a cabinet 76, indicated in dotted lines in Figure 5, or the like, may be conveniently and removably positioned resting on shelf 60, as for example to keep dishes and food warm while the table, employed as a service table, is being moved

to a room in a hotel, club or home preparatory to serving food there. As shown in Figure 5, in order to receive cabinet 76, the brace members 72 and 74 and 72a and 74a for the main table top portions 10 and 12 respectively, are all positioned on the same side of a plane passing through the longitudinal median line of the table leaving an unobstructed space between shelf 60 and the top, on the other side of said plane.

It will be understood that instead of having one end of a drop leaf brace means fixed to a drop leaf and its other end slideable on rod 40 or 56, extending between legs of support means for the main table top, the reverse of this arrangement may be employed within the scope of my invention. Thus as shown in Figure 7 one end of the portion 80, of a drop leaf brace may be pivoted to a link 82 which is fixed to the leg 84 of support means for the main table top portions 85 to which a drop leaf 86 is hinged and the other end of the said rigid member may be pivotally connected to an eye 88 which is slideable on a rod 90 fastened to the under surface of the drop leaf 86 and extending in a plane parallel to the plane of the drop leaf, or mounted in any other suitable way for sliding movement on said drop leaf and for rotative movement with respect to the drop leaf.

Another advantage of the structure disclosed herein is that when the table is folded the brace means for the drop leaves serve to hold the drop leaves against the outer side of the support means respectively and prevent flapping of the brace means against the legs.

It will thus be seen that there has been provided by this invention a method and apparatus in which the various objects hereinabove set forth together with many thoroughly practical advantages are successfully achieved. As various possible embodiments might be made of the mechanical features of the above invention and as the art herein described might be varied in various parts, all without departing from the scope of the invention, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

What I claim is:

1. A drop leaf construction for a table or the like comprising a plurality of drop leaves hinged to a plurality of edges of the top of said table or the like, two pairs of legs for supporting said table positioned adjacent the respective edges of the table top to which said drop leaves are respectively joined, cross rods interconnecting the legs of said pairs of legs respectively, and other brace means interconnecting said rods and the under surfaces of said drop leaves respectively, said brace means each comprising a rigid member having pivotally attached at one end an eye adapted to be slipped over one of said rods and to be rotatable and slideable on the rod, the said pivotal connection between said rigid member and said eye permitting angular movement of said rigid member in a plane at right angles to the rotative movement of said eye and said rigid member about said rod, said rigid member being connected at its other end to a link by a pivot the axis of which is substantially parallel to the axis of the pivot joining said rigid member to said eye, said link being pivotally connected at its other end to a bracket secured to the under surface of said drop leaf, the axis of the pivot connecting said link to said bracket being at right angles to the axis of the pivot connecting said link to said rigid member said drop leaf braces serving, when

the drop leaves are elevated, as a lock preventing folding of the table top.

2. A drop leaf construction for a table or the like comprising a plurality of drop leaves hinged to a plurality of edges of the top of said table or the like, two pairs of legs for supporting said table positioned adjacent the respective edges of the table to which said drop leaves are respectively joined, cross rods interconnecting the legs of said pairs of legs respectively, and braces interconnecting said drop leaves to said cross rods respectively, said braces being connected to said drop leaves respectively by connecting means permitting pivotal movement of the braces with respect to the drop leaves respectively in a plurality of planes at right angles to one another, and being connected to said cross rods respectively by means permitting pivotal movement of the braces with respect to said cross rods respectively in planes including both a brace and the cross rod means to which it is connected, and also permitting sliding movement of each brace along the cross rod means to which it is connected.

3. A drop leaf construction comprising a drop leaf member, hinges for joining said drop leaf member along one edge to a support member for movement from a folded position in a vertical plane to an unfolded position in a horizontal plane, a rod extending under and parallel with said table leaf adjacent to but beyond the hinged edge of said drop leaf, and at least one brace member interconnected between said rod and said drop leaf, said brace member being connected to the under surface of said drop leaf by pivotal means permitting angular movement of said brace means in planes extending both transversely and longitudinally of said drop leaf, and said brace means being connected to said rod by means permitting rotation of said brace member around said rod and sliding movement of said brace member along said rod.

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