Aug. 19, 1952 H. HOWE 2,607,647

SECTIONAL TOP FOLDING TABLE ADAPTED TO STAND IN FOLDED POSITION

Filed July 19, 1948

Fig. 1.

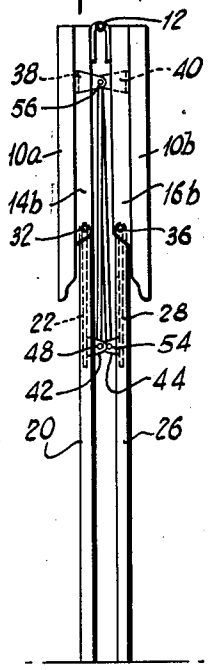


Fig. 2.

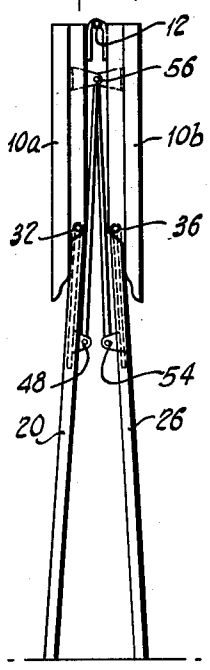


Fig. 3.

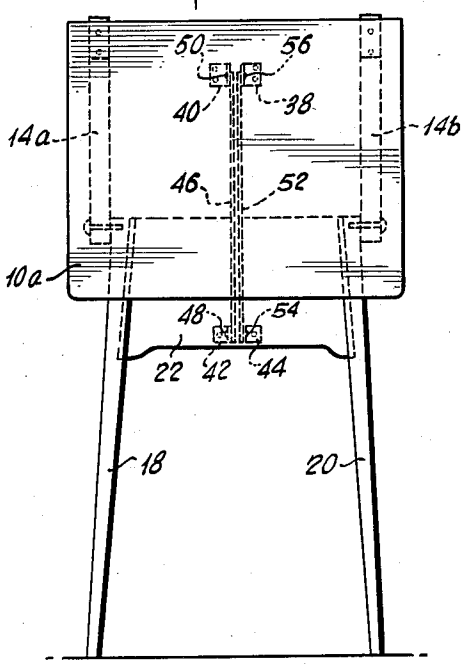


Fig. 4.

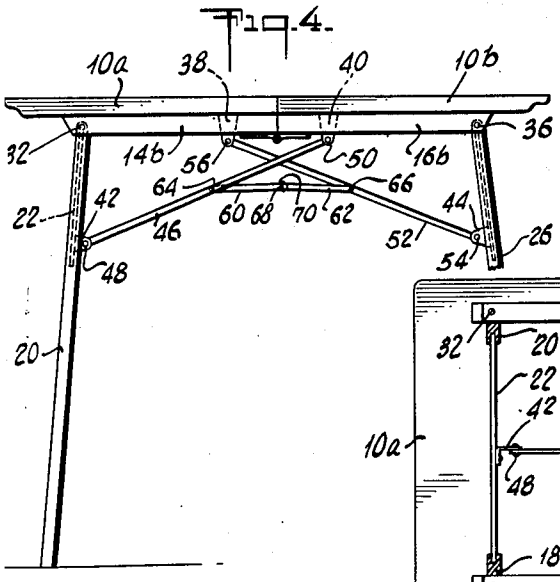
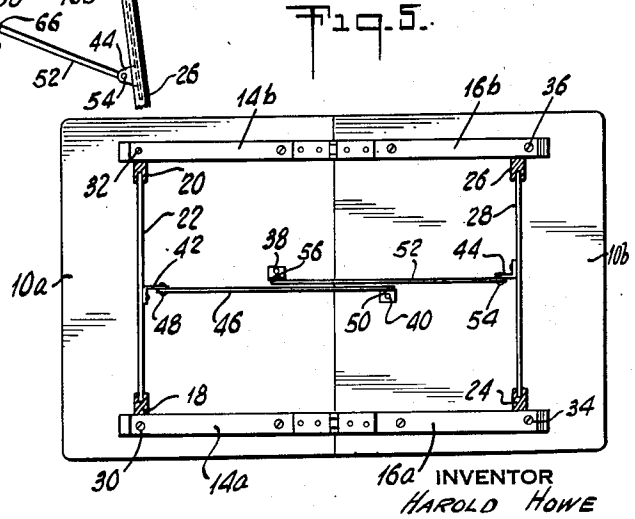


Fig. 5.



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SECTIONAL TOP FOLDING TABLE ADAPTED TO STAND IN FOLDED POSITION

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3 Claims. (Cl. 311—92)

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This invention relates to folding tables of the kind having a divided foldable top. Prior art tables of this kind are made either, with legs which are parallel when the top halves are collapsed and initiate opening of the top halves immediately when separated, or with legs which cannot be folded into parallel planes even when the top halves are fully collapsed but remain angularly related and thus render it impossible to fold the table flat. Thus the prior art tables either cannot be completely collapsed and folded flat, as for shipping, or if they can be folded flat they cannot have their legs spread apart enough to stand by themselves without initiating unfolding of the top halves. This is a deficiency in the prior art as it is often desirable to have a table which may be folded flat and the legs of which may be unfolded from abutting parallel relation sufficiently to permit the table to stand alone and without opening or initiating opening of the top halves.

An object of the invention is to overcome the deficiency of the prior art and provide a folding divided-top table which is adapted to stand on its own support means both when the top is unfolded and when it is collapsed, and also to fold flat.

Another object of the invention is to provide a collapsible table having a folding top the top parts of which open with the legs after the legs have been spread apart a distance sufficient to support the structure with the top parts in folded position.

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 side elevation of a table embodying the invention with the top halves and the support means therefor in fully folded position;

Figure 2 is a side elevation showing the table with its legs spread apart sufficiently to support the structure but with the top parts substantially unfolded;

Figure 3 is an end elevation view of the fully folded table;

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Figure 4 is a side elevation of the table in unfolded position, with means added for locking the table in unfolded position; and

Figure 5 is a bottom plan view of the structure shown in Figures 1–3.

The term "bracket" or "brackets" is used herein in a broad sense to indicate means including cross pieces, braces and the like by which the pivots interconnecting the braces with the table top parts are projected toward one another and spaced from the under surface of the table top parts respectively, and by which the pivot points joining the braces to the legs or supporting means respectively are projected inwardly toward one another and spaced from said legs or supporting means.

The table top is divided into two parts 10[a] and 10[b] joined together by hinge means 12 which permits the top parts to be folded from abutting relation, as shown in Figures 4 and 5 to a position in which they lie in adjacent parallel planes, as illustrated in Figures 1–3.

On the inner surfaces of the top parts respectively are the battens 14[a], 14[b] and 16[a], 16[b] to which the support means are attached. The support means for the top half 10[a] comprises legs 18 and 20 and the interconnecting web 22. The support means for top half 10[b] comprises legs 24 and 26 and the interconnecting web 28. The upper ends of legs 18 and 20 are connected by pivots 30 and 32 to the battens 14[a] and 14[b] respectively on the top half 10[a]. The upper ends of legs 24 and 26 are connected by pivots 34 and 36 to the battens 16[a] and 16[b] respectively on top half 10[b].

Projecting from the under surface of the top parts 10[a] and 10[b] respectively are brackets 38 and 40, and projecting inwardly from the webs 22 and 28 respectively are the brackets 42 and 44. A brace member 46 is connected at one end to bracket 42 on web 22 by pivot 48, and at its other end to bracket 40 on top half 10[b] by pivot 50, and a second brace is connected at one end to bracket 44 on web 22 by pivot 54 and at its other end to bracket 38 by pivot 56. Thus each brace member extends from a top half across the hinge line to the support means for the other top half.

The brackets 38 and 40 are devised and positioned so that the pivot connections 56 and 50 between the top halves 10[a] and 10[b] respectively and the brace members 46 and 52 lie in substantially the same vertical plane when the table is in fully folded position. This disposition of the pivots for the tops of the brace members makes it possible to initiate unfolding of the

pairs of legs comprising the support means for the respective table top halves, as for example from the position shown in Figure 1 to the position shown in Figure 2, and to move the support means far enough apart to support the table in upright position without unfolding of the top parts from their folded, substantially parallel position.

Preferably brackets 42 and 44 are positioned so that the pivot connections 48 and 54 between the webs 22 and 28 of the support means respectively and the brace members 46 and 52 lie in substantially the same vertical plane when the table is fully folded to facilitate unfolding of the legs sufficiently to support the table with the top parts unfolded and in parallel planes.

I have found that with either pivot connections 56 and 50 or 48 and 54 disposed so as to be substantially in the same vertical plane when the table is folded the support means for the respective table top halves may be moved apart sufficiently to support the table in upright position with the top halves retained in their folded, substantially parallel position. However, this is accomplished most effectively when the pivots 56 and 50 are quite accurately aligned in the same vertical plane when the structure is folded, and with the pivots 48 and 54 substantially aligned but slightly spaced apart.

In Figure 4 the braces 46 and 52 are shown interconnected by the links 60 and 62 which are joined to the brace members by pivots 64 and 66 respectively and interconnected by pivot 68. A stop 70 is provided on one of the links limiting the movement of the links upward slightly beyond the position of alignment, thus providing a lock against accidental collapsing of the table.

The table disclosed herein has the advantage that it does not have to be removed from its place of use and stored away when the top halves are collapsed but will remain standing. The space in a room may be conserved and at the same time the table may remain conveniently on hand and supported on its own support means. For shipping however the legs may be folded close together thus conserving space and eliminating breakage which occurs if tables are packed with the legs for the respective top halves unfoldable beyond a position in which they will support the structure in standing position.

It will thus be seen that there has been provided by this invention a table structure in which the various objects hereinabove set forth are successfully achieved with practical advantages. 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 as claimed, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

What I claim is:

1. A folding table comprising a top divided into two parts and hinge means joining said parts together so they can be moved from abutting relation into adjacent parallel planes, supporting means for said table top parts respectively, and braces interconnecting each table top part with the supporting means for the opposite table top part, said brace means being pivotally connected to said supporting means respectively, brackets projecting from the under surface of said table top parts, and pivots interconnecting said brackets and said braces respectively, said pivots being disposed so that when the table is folded the pivots will be substantially aligned laterally of the table and therefore in substantially the same vertical plane.

2. The structure as specified in claim 1, in which brackets are provided inwardly from said supporting means respectively, in opposed relation, and the pivots interconnecting said brace means and said supporting means are provided in said brackets respectively, and spaced from the supporting means so that when the table is fully collapsed the said pivots will be substantially aligned laterally of the table so that they lie substantially in the same vertical plane.

3. A folding table comprising a top divided into two parts and hinge means joining said parts together so that they can be moved from abutting relation in a single horizontal plane into adjacent parallel planes, supporting means hinged to said top parts respectively, brace members interconnecting each top part to the supporting means for the opposite top part, pivotal connections between said brace members and said table top parts respectively, and means for mounting said pivots so that when the table is folded said pivots will lie substantially in the same vertical plane, pivotal connections between the other ends of said brace members and said supporting means respectively, and means for supporting said pivots in spaced relation to said supporting means so that when the table is collapsed said pivots will lie in substantially the same vertical plane.

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