Jan. 10, 1928. 1,655,516

H. A. SIMPSON

DINING TABLE CABINET

Filed May 11, 1925 2 Sheets-Sheet 1

Fig. 1.

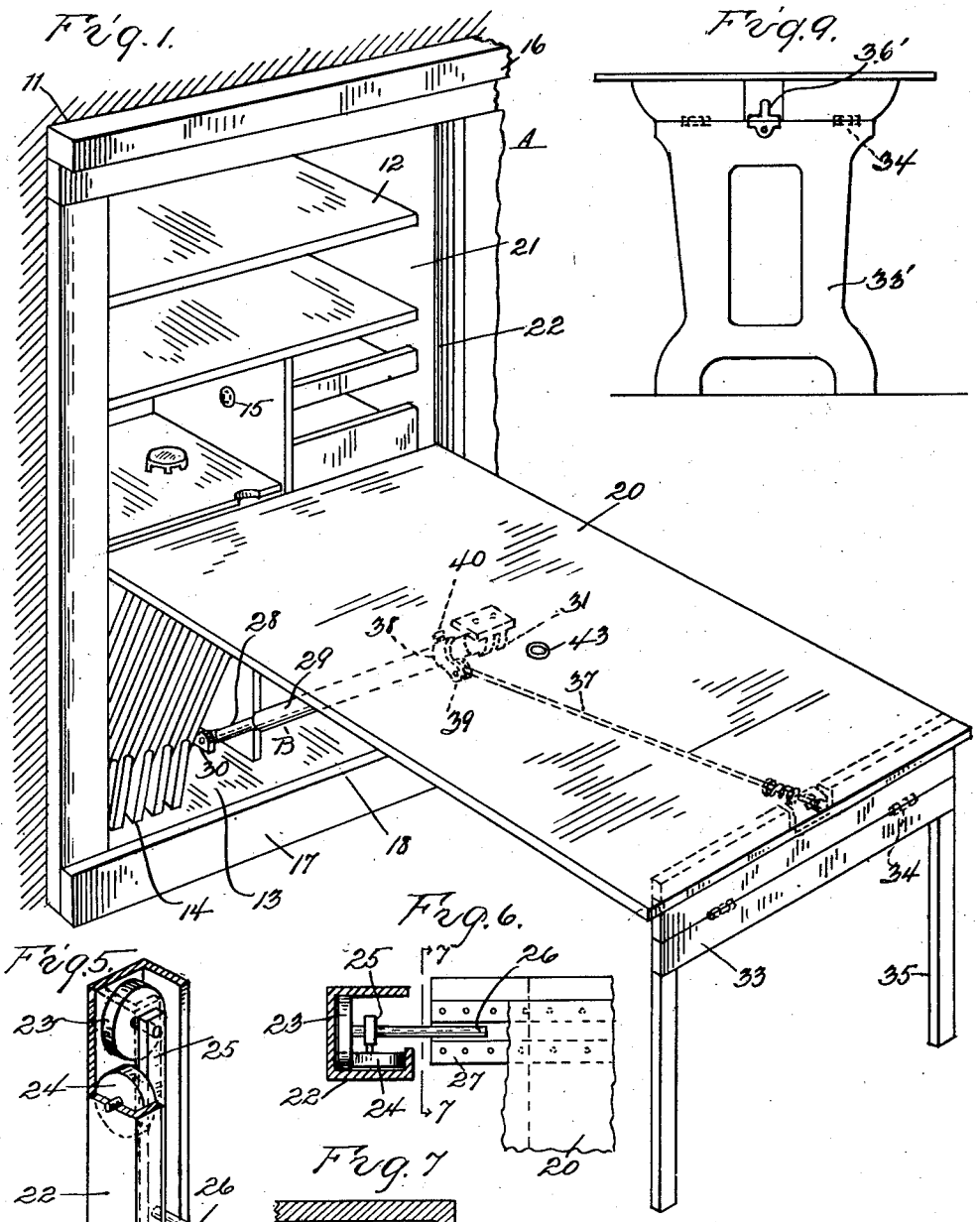


Fig. 9.

Fig. 5.

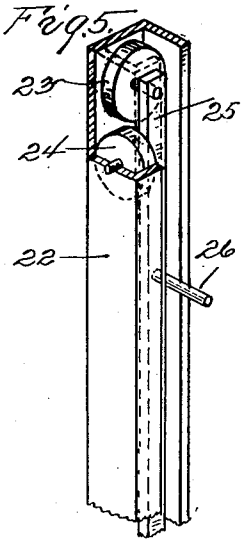
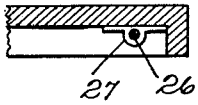


Fig. 6.

Fig. 7



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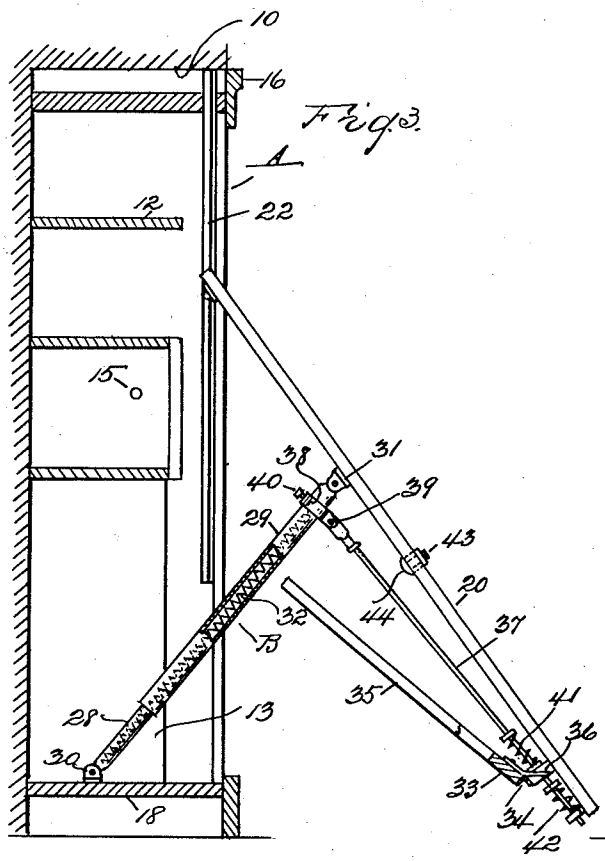


Fig. 3.

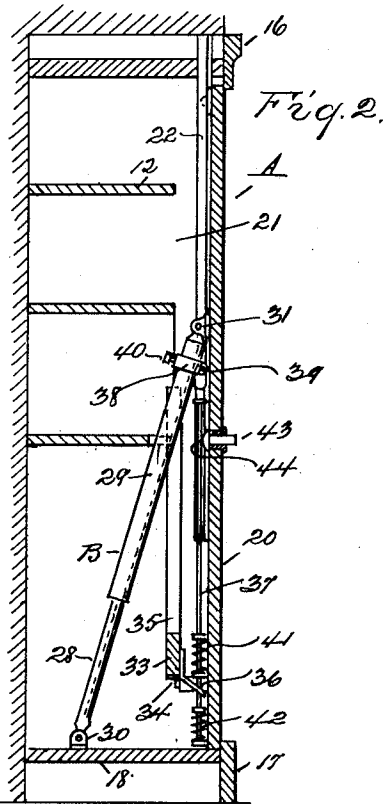


Fig. 2.

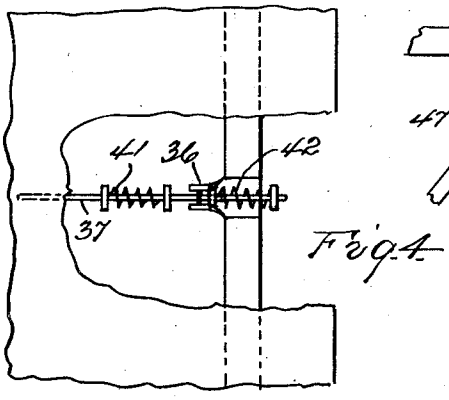


Fig. 4.

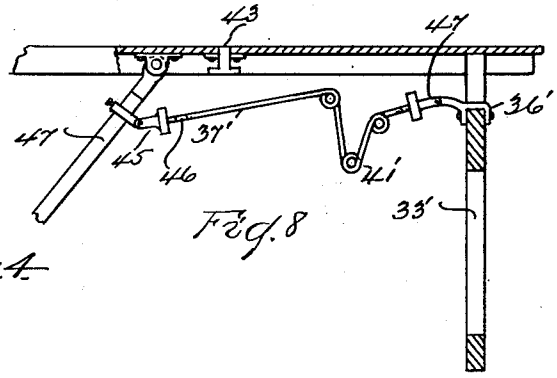


Fig. 8.

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UNITED STATES PATENT OFFICE.

HERBERT A. SIMPSON, OF LANSING, MICHIGAN.

DINING-TABLE CABINET.

Application filed May 11, 1925. Serial No. 29,599.

The invention relates to a dining table cabinet and refers more particularly to a table construction which is adapted to be folded into a position adjacent a wall or cabinet or the like when not in use. One of the objects of the invention is to provide a table which may be cheaply manufactured, which may be conveniently and easily operated to be projected from a position normally vertically to a horizontal position when it may be used as a table or the like. A further feature of the invention resides in the provision of a supporting member adapted to be folded adjacent the table and also to be automatically unfolded or swung into a position substantially at right angles with the table when the latter is moved to its horizontal position. A still further feature of the invention resides in the provision of a cabinet formed with a plurality of partitions, shelves, or the like, which are adapted to receive various articles to be used when the table is extended into the horizontal position for use.

With these and other objects in view the invention resides in the novel features of construction and combinations and arrangements of parts as more fully hereinafter described and claimed.

Referring to the drawings:

Figure 1 is a perspective view showing a table panel in position for use,

Figure 2 is a sectional elevation of the cabinet and table panel when the latter is folded into its vertical position,

Figure 3 is a view corresponding to Figure 2 showing the table panel in a position intermediate that shown in Figures 1 and 2,

Figure 4 is a detailed plan view of the forward end of the table panel, a part of the panel being broken away to show the means for folding the same,

Figure 5 is a fragmentary view in perspective showing in detail the construction of the shoe for affording the sliding engagement between the table panel and the cabinet,

Figure 6 is a detailed view showing the connection between one of the shoes and the table panel,

Figure 7 is a view along 7—7 of Figure 6,

Figure 8 is a fragmentary elevation view of a modified form of my invention, and

Figure 9 is an elevation view of the form shown in Figure 8.

Referring to the drawings in which like reference characters indicate corresponding parts reference character A indicates a cabinet which may or may not be located within recess 10 of a wall 11. The cabinet A is preferably formed with a plurality of shelves or compartments 12 adapted to receive dishes, silverware, and other articles which may be used in connection with the table panel when the latter is extended into the position shown in Figure 1. The cabinet A is also preferably formed with a lower partition 13 adapted to receive a plurality of foldable chairs 14 for use with the table. 15 indicates an electrical plug for connection with an electric toaster, percolator, or other appliance. 16 indicates a stationary upper front portion of the cabinet, and 17 a lower front portion. 18 represents the floor or bottom member of the cabinet, which bottom member is preferably positioned slightly below the upper edge of the front portion 17. A table panel 20 is provided and is adapted to be slidably connected with the side panels 21 of the cabinet A by reason of the connection shown in Figure 5. Secured adjacent the forward edges of the side panels 21 are the track members 22 engageable by a set of rollers 23 and a second set of rollers 24 at right angles to the set 23. The rollers 23 and 24 are rotatably supported by the shoe 25 which preferably is formed with the pivot pin 26. 27 indicates bearing brackets positioned beneath the rear edge of the table panel 20, the brackets 27 being adapted to rotatably receive the pivot pins 26 at opposite edges of the table panel 20. As shown in Figure 2 the table panel 20 is adapted to be positioned vertically, the lower edge of the table panel resting adjacent the bottom member 19 and behind the upwardly projecting edge of the lower front portion 18 of the cabinet. Likewise the upper edge of the table panel is preferably adapted to be located behind the upper front portion 16.

B indicates a telescopic brace formed of the sections 28 and 29 respectively pivotally attached at 30 and 31 with the bottom member 19 and table panel 20. The telescopic brace B preferably forms a housing for a compression spring 32 which normally tends to separate the sections 28 and 29. 33 indicates a supporting member hinged at 34 to the forward portion of the table panel 20. The supporting member 33 may be formed with the supporting legs 35 or the like,

adapted in the position shown in Figure 1 to support the forward end of the table panel. 36 indicates a bracket member carried by the supporting member 33, the bracket member having an opening adapted to slidably receive a rod 37. One end of this rod is preferably adjustably connected with the section 29 by reason of an adjustable collar 38. 39 indicates a pivot point between the collar 38 and the rod 37. The collar 38 is adapted to be adjusted longitudinally of the section 29 by reason of a set screw or the like 40. The other end of the rod 37 is provided with springs 41 and 42 adapted to respectively engage the bracket 36 to act on the same to either fold the supporting member 33 parallel with the table panel 20, as shown in Figure 2, or to extend the supporting member into the position shown in Figure 1.

A finger piece 43 is slidable in an opening in panel 20 and normally when the panel is in the position shown in Figure 1 the upper face or surface of this panel is adapted to lie substantially in the upper plane surface of the panel. As the panel is swung into its vertical position, however, the under face 44 of the finger piece will be engaged by the rod 37 so as to force the finger piece outwardly projected from the table panel 20 into the position shown in Figure 3.

In operation, with the parts as shown in Figure 2, when it is desired to extend the panel 20 so as to form a table the operator raises the panel 20 by means of the finger piece 43 a sufficient distance to clear the lower edge of the panel of the lower front portion 18. At this time the spring 32 of the telescopic brace B will automatically force the panel 20 outwardly, the rollers 23 and 24 running in the track 22 to guide the upper or rear end of the panel in a downward movement into the position shown in Figure 1. The movement of the telescopic brace when the panel is being extended to its horizontal position will cause a thrust to be exerted by the rod 37 so as to cause the spring 42 to act upon the bracket 36 and automatically swing the supporting member 33 into a position at right angles with the panel 20. At the same time the rod 37 will be swung a sufficient distance away from the under surface of the table panel 20 as to permit the weight of the finger piece 43 to cause the finger piece to move downwardly so as to place its upper surface substantially in the plane of the table panel. The compressive force of the spring 32 is preferably sufficiently great to substantially balance the weight of the panel 20 and the supporting member 33 when the parts are in the position shown in Figure 2. Very little effort is therefore required on the part of the operator in lifting the panel 20 to clear the front portion 18. The spring 32 will then act to exert an outward thrust on the panel and automatically project the same into the position shown in Figure 1.

When it is desired to reverse this operation the operator merely lifts the rear portion of the table panel 20 and since the parts are in a practically balanced condition very little effort is required to move the panel against the action of spring 32 back to the position shown in Figure 2. During this movement the rod 37 will cause the spring 41 to act on the bracket 36 to automatically fold the supporting member 33 and the legs 35 thereof into parallel relation with the panel 20.

In moving the panel 20 into its extended position or from its extended position back to the folded position it will be noticed that any side thrust of the panel 20 is taken up by the rollers 24, while the end thrust of the panel due to the spring 32 and any force which the operator might place on the panel in this direction is absorbed by the rollers 23, at right angles with the rollers 24.

While I have shown and described the parts of my invention in connection with a cabinet A which may be located within a suitable recess 10 or the like, I desire to have it understood that the panel and telescopic brace may be equally effectively operated in connection with a cabinet which is not located within a recess but may form a separate article of furniture placed wherever desired. Furthermore it is apparent that the cabinet may be entirely dispensed with, the telescopic brace and panel being connected with any appropriate structure.

Referring to Figures 8 and 9 I have shown a modification of my invention in which the springs 41 and 42 may be dispensed with. In this construction the supporting member 33′ is provided with a bracket 36′ rigidly carried by the supporting member. In this instance the rod 37′ is preferably bent or looped at a plurality of points indicated at 41′ to afford the desired flexibility and resilience of operation when telescopic brace B actuates the supporting member 33′ to either fold the same beneath the table panel or extend the same into supporting position. The rod 37′ is preferably adjustably engageable at its opposite ends with the member 45 by reason of the threads 46. The members 45 are pivoted at 47.

While it is believed that from the foregoing description the nature and advantages of my invention will be readily understood I desire to have it understood that I do not limit myself to what is herein shown and described and such changes may be resorted to when desired as fall within the scope of the claims.

What I claim as my invention is:

1. A device of the character described comprising, a cabinet, a panel slidably connected

at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertically to form a front closure for a cabinet and in a horizontal position to form a table, and means automatically responsive to the movement of the panel for positioning the said supporting member adjacent the panel within the cabinet when the panel is moved to the vertical position and for positioning the supporting member at right angles with the panel when the latter is extended to said horizontal position.

2. A device of the character described comprising a cabinet, a panel slidably connected at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertically to form a front closure for the cabinet and in a horizontal position to form a table, a telescopic brace connected at one end to the bottom of the cabinet and at the other end to the panel, a compression spring tending to extend the parts of the telescopic brace, and means automatically responsive to the movement of the panel for positioning the said supporting member adjacent the panel within the cabinet when the panel is moved to the vertical position and for positioning the supporting member at right angles with the panel when the latter is extended to the horizontal position.

3. A device of the character described comprising a cabinet, a panel slidably connected at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertical to form a front closure for the cabinet and in a horizontal position to form a table, a telescopic brace connected at one end to the bottom of the cabinet and at the other end to the panel, a compression spring tending to extend the parts of the telescopic brace, and a rod engageable with the said brace and supporting member for automatically folding the supporting member beneath the panel and within the cabinet when the panel is positioned vertically and for automatically extending the supporting member into supporting position for the panel when the latter is moved into its horizontal position.

4. A device of the character described comprising a cabinet, a panel slidably connected at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertically to form a front closure for the cabinet and in a horizontal position to form a table, a telescopic brace connected at one end to the bottom of the cabinet and at the other end to the panel, a compression spring tending to extend the parts of the telescopic brace, and a resilient connection between the said brace and supporting member for automatically folding the supporting member beneath the panel and within the cabinet when the panel is positioned vertically and for automatically extending the supporting member into supporting position for the panel when the latter is moved into its horizontal position.

5. A device of the character described comprising a cabinet, a panel slidably connected at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertically to form a front closure for the cabinet and in a horizontal position to form a table, a telescopic brace connected at one end to the bottom of the cabinet and at the other end to the panel, a compression spring tending to extend the parts of the telescopic brace, and means automatically responsive to the movement of the panel for positioning the said supporting member adjacent the panel within the cabinet when the panel is moved to the vertical position and for positioning the supporting member at right angles with the panel when the latter is extended to the horizontal position, said spring adapted to substantially balance the weight of the panel and supporting member in the vertical position of the panel and adapted to automatically project the panel from the said vertical position to the horizontal position.

6. A device of the character described comprising a cabinet, having a lower front portion, a panel slidably connected at one end of the cabinet in its vertical position to form a closure for the cabinet, the lower edge of the panel engaging the rear of the said lower front portion, means whereby the panel may be extended to its horizontal position to form a table, means for supporting the panel in the said horizontal position, a finger piece movable transversely through said panel and having an end adapted to lie substantially in the plane of the panel when the latter is in the said horizontal position, and means responsive to a movement of the panel to its vertical position for projecting the finger piece beyond the plane of the panel whereby in the latter position the finger piece may be grasped by the operator to raise the panel to clear the said lower front portion.

7. A device of the character described comprising a cabinet, a panel slidably fixed at one end with the cabinet, means whereby the panel may be selectively positioned vertically or horizontally, a supporting member for said panel adapted to be folded parallel with the panel and within the cabinet when the panel is in the vertical position, resilient means substantially balancing the weight of the panel in the said vertical position and tending to urge the panel into the said

horizontal position, and means automatically responsive to the movement of the panel to the horizontal position for moving the supporting member from the folded position to a position for supporting the panel.

8. A device of the character described comprising a cabinet, a panel slidably fixed at one end with the cabinet, means whereby the panel may be selectively positioned vertically or horizontally, a supporting member for said panel adapted to be folded within the cabinet parallel with the panel when the latter is in the vertical position, resilient means substantially balancing the weight of the panel in the said vertical position and tending to urge the panel into the said horizontal position, and means engageable with said resilient means and actuable thereby for moving the supporting member perpendicular to the panel when the latter is moved to its horizontal position.

9. A device of the character described comprising a cabinet, a panel slidably connected with said cabinet and adapted to be positioned vertically to form a closure for said cabinet or horizontally to form a table, a finger piece movable transversely through said panel and adapted to lie substantially in the plane of the panel in the horizontal position of the panel, and to project from the panel in the vertical position of the panel, and means automatically responsive to the movement of the panel for causing the aforesaid projection of the finger piece.

10. A device of the character described comprising a cabinet, a panel slidably connected at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertically to form a front closure for the cabinet and in a horizontal position to form a table, a telescopic brace connected at one end to the bottom of the cabinet and at the other end to the panel, a compression spring tending to extend the parts of the telescopic brace, and means automatically responsive to the movement of the panel for positioning the said supporting member adjacent the panel within the cabinet when the panel is moved to the vertical position and for positioning the supporting member at right angles with the panel when the latter is extended to the horizontal position, said spring adapted to substantially balance the weight of the panel in the vertical position thereof and tending to urge the panel from the said vertical position into the horizontal position.

11. A cabinet of the character described comprising, a cabinet, a panel slidably connected at one end to the cabinet, a supporting member pivotally carried by the panel at the other end thereof, means whereby the panel may be positioned vertically to form a front closure for a cabinet and in a horizontal position to form a table, said supporting member being adapted to be positioned within the cabinet when the panel is moved to the vertical position, said supporting member being adapted to be positioned at right angles with the panel when the latter is extended to the said horizontal position.

12. A cabinet comprising longitudinally extending grooves, a panel having a pivotal sliding connection in said grooves at its upper end and normally forming a front closure for the cabinet, and a telescopic brace secured at its opposite ends to the cabinet and panel respectively, said brace lying within the cabinet when the panel is in its position to form the front closure for the cabinet, and a spring associated with said brace for automatically swinging said panel on its pivot away from the cabinet.

13. A device of the character described comprising a cabinet, a panel slidably connected at one end to the cabinet, means whereby the panel may be moved to two extreme positions, in one of which it forms a front closure for the cabinet, and in the other of which it forms a table, a brace connected at one end to the cabinet and at the other end to the panel, a supporting member pivoted to the free end of the panel, the said brace and the said supporting member being adapted to be positioned within the cabinet when the panel is moved to the closure forming position, and means connecting the said brace and the said supporting member for effecting a cooperation between the same.

In testimony whereof I affix my signature.

HERBERT A. SIMPSON.