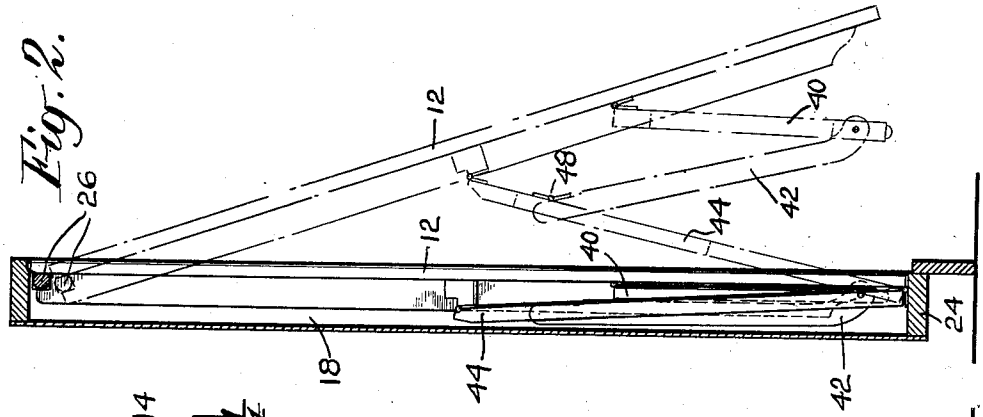
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FOLDING FURNITURE

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Fig. 2.



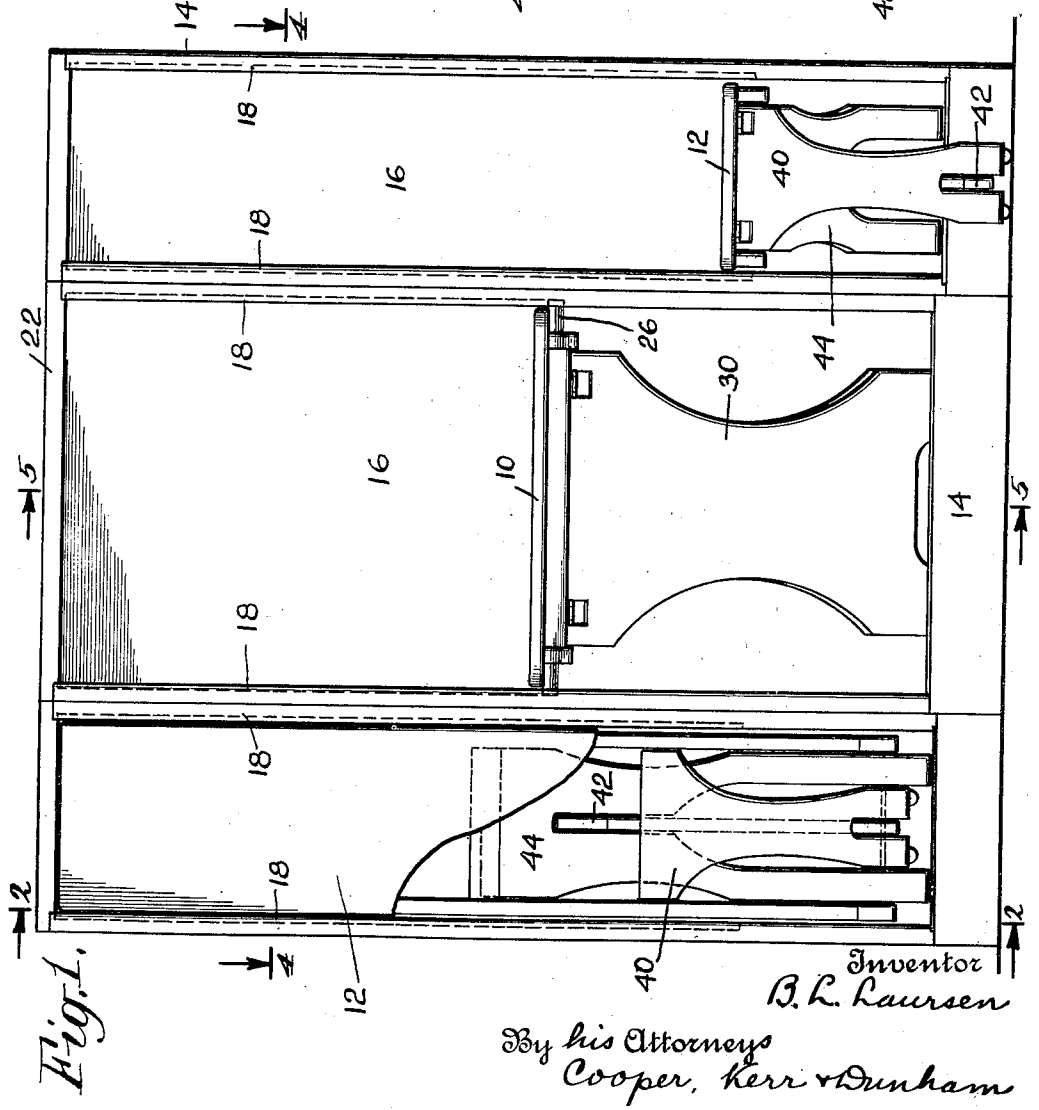


Fig. 1.

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FOLDING FURNITURE

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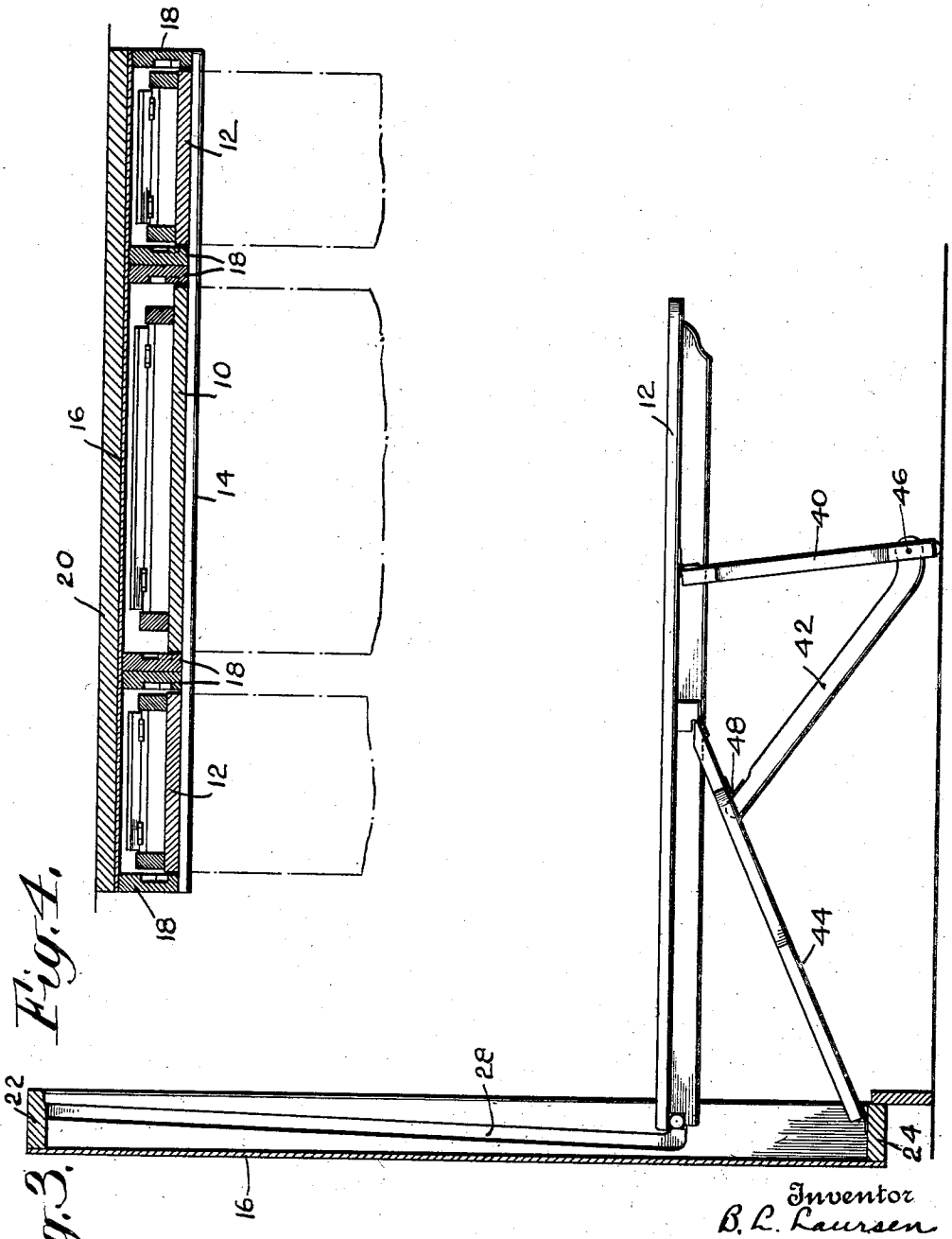


Fig. 4.

Fig. 3.

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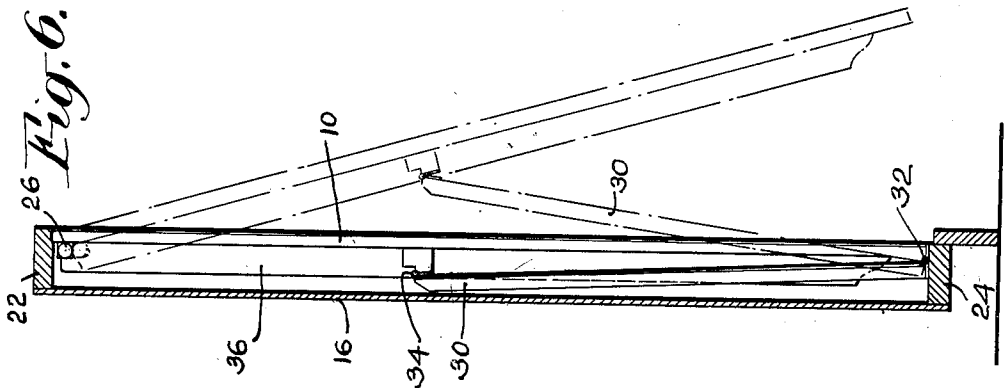
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FOLDING FURNITURE

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Fig. 6.



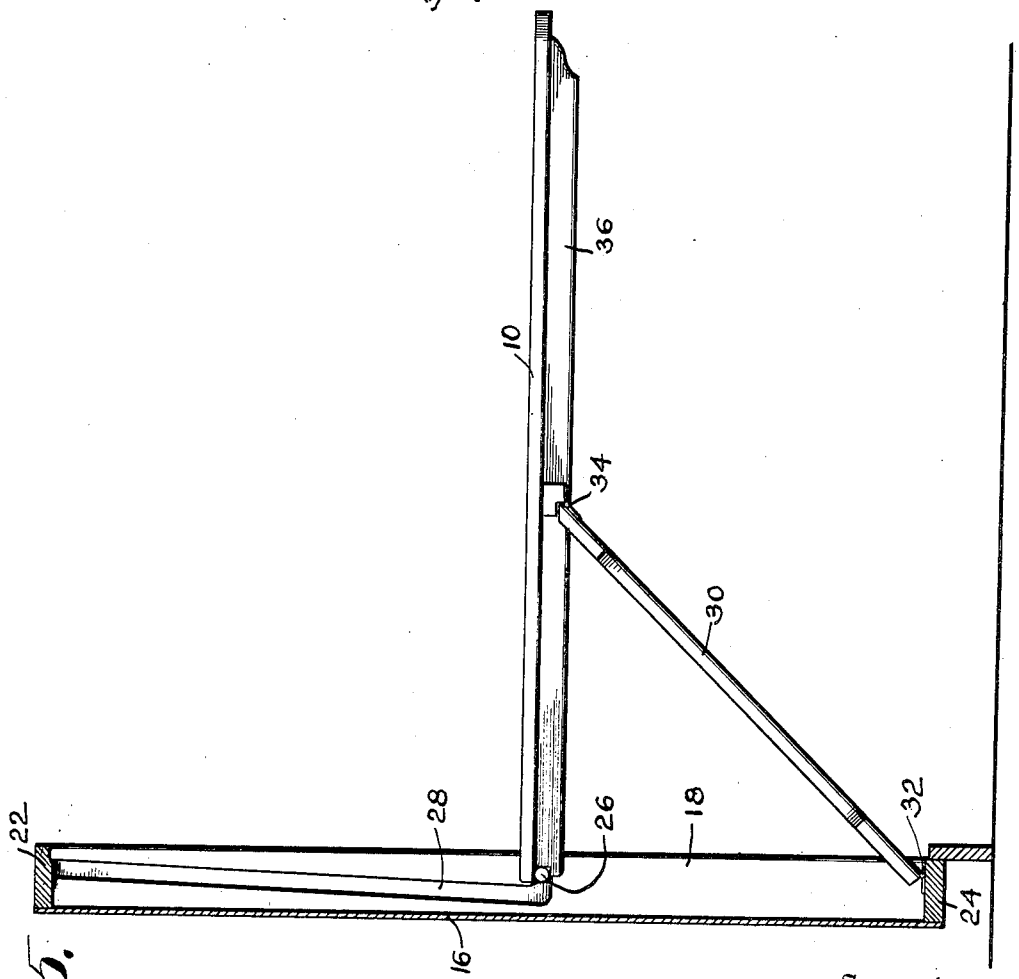


Fig. 5.

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Patented June 17, 1930

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UNITED STATES PATENT OFFICE

BRUNO LAURIS LAURSEN, OF DUNEDIN, FLORIDA, ASSIGNOR, BY MESNE ASSIGNMENTS, OF FORTY-EIGHT PER CENT TO CLEARWATER LUMBER COMPANY, INCORPORATED, OF CLEARWATER, FLORIDA, A CORPORATION OF FLORIDA

FOLDING FURNITURE

Application filed November 23, 1926. Serial No. 150,181.

This invention pertains to folding furniture, particularly seats and tables.

It is an object of the invention to disclose an arrangement of tables, seats, or other units which permits using them either together or separately.

Another object is to produce an arrangement of table and seats of such design that they may be enclosed in a cabinet which, in turn, may be attached to a wall or installed in a wall or partition, even in a partition less than four inches thick.

Another object is to provide furniture which will be automatically locked in operative position.

Another object is to so arrange the supports of the units that they may be moved from operative to nonoperative position or vice versa, by a single continuous motion without the necessity for breaking joints or adjusting fastening devices.

Another object is to so design the apparatus that the various component parts will be automatic in action.

Another object is to so balance the parts and control their operation that the devices will require slight effort either to open or close.

Another object is to so design the device that the panels of the cabinets will automatically remain closed without use of fastenings.

Another object is to so design the device as to provide an automatic retarding effect to prevent slamming when bringing the parts to operative position.

Another object is to provide a design which presents a smooth, attractive appearance when the cabinet is closed.

Further and other objects and advantages will be hereinafter set forth in the accompanying specification and claims and shown in the drawings, which by way of illustration show what is now considered to be the preferred embodiment of the invention.

Fig. 1 is a front view, with table and one seat in operative position, and with one seat folded up into the cabinet, a portion of the folded seat being broken away to show its supporting structure in folded position.

Fig. 2 is a cross-section on line 2—2 of Fig. 1, showing, in addition, by broken lines, the seat partly folded.

Fig. 3 is a side view of a seat in operative position, with the cabinet in section.

Fig. 4 is a cross-section on line 4—4 of Fig. 1.

Fig. 5 is a cross-section on line 5—5 of Fig. 1, showing the table in operative position.

Fig. 6 shows the table in fully folded and partly folded position.

Although our invention is suitable for a variety of furniture units, we have chosen to illustrate and describe it as applied to a table with a seat on each side. Such an arrangement is commonly termed a "breakfast nook."

The arrangement herein shown comprises a table 10 and a seat 12 on each side of the table. The table and seats are associated with a wall cabinet 14 in such relationship that when the units are not wanted for use they may be folded into suitable compartments. The cabinet comprises a back board 16 and a number of uprights 18 so spaced as to not only provide proper support for the units in all positions, but also to cooperate with them while in folded position in order to form an attractive cabinet, with the furniture tops 10 and 12 forming the front panels thereof. The cabinet may be attached to a wall or partition such as 20 (Fig. 4) or may be incorporated in the wall itself. In Fig. 4 it will be seen that the front edges of the intermediate uprights 18, the table top 10 and seats 12 form a practically continuous plane surface to form the front of the cabinet. A cap 22 is placed on top of the cabinet and a base plate 24 is provided along the bottom.

The table comprises a top 10, at the rear end of which is attached a round cross bar 26, the ends of which project as trunnions into grooves 28 in the sides of uprights 18. Each groove 28 is shaped with a short horizontal section at substantially the level of the table top while in operative position, and a long vertical section extending to the top of upright 18. The vertical section of

the groove is inclined slightly toward the front of the cabinet as shown in Fig. 5.

The cap 22 is grooved at the underside of its forward portion, Figures 2, 3, 5 and 6, to receive the upper and rear ends of the units 10 and 12.

Supporting top 10 is a strut member 30, which is hinged at its lower end to base plate 24 by hinge 32 and at its upper end to the under side of the top 10, by hinge 34.

While in operative position, as in Fig. 5, the short horizontal lower section of groove 28, and the weight of the table top itself and any load placed on it tend to maintain the trunnions in that position.

In order to fold the table into the cabinet it is only necessary to press the top toward the rear and downwardly. This first moves the trunnions in the vertical groove, and then forces them upwardly in grooves 28 until the table assumes the position shown by the full lines in Fig. 6. An intermediate position is indicated by the broken lines. It will be noticed that in folded position the weight of the table is supported by strut 30 and that hinge 34 is further toward the rear of the cabinet than hinge 32. It is, in fact, far enough to the rear so that the center of gravity of the structure is behind hinge 32, which means that the table automatically tends to hold itself in folded position and no fastening device of any kind is required.

The construction and operation of seat 12 is similar in every way to the table already described, except that the seat is provided with an additional support 40 to help carry the heavier load which the seat will be called upon to bear (Fig. 3). Support 40 is hinged at its upper end to seat 12 and is interconnected by brace 42 to strut member 44. The lower end of brace 42 is pivoted to strut 40 by pin 46, and the upper end of 42 is pivoted to 44 by hinge 48.

The operation of folding the seat is exactly the same as that already described for folding the table. The folding operation is shown in its completed stage, and at one intermediate stage, in Fig. 2. As in the case of the table, the seat automatically holds itself in folded position without the aid of fastening devices.

The inter-relationship of the supporting members of both seat and table is such that they all fold compactly into the space between the furniture top, and the back 18 of the cabinet.

To place either the seat or the table in operative position the above described folding operation is simply reversed.

During the unfolding operation, as soon as the center of gravity of the structure has passed to the front of the hinge supports the tendency is for the structure to fall outwardly and downwardly to assume its operative position. This means that the trunnions on the ends of rod 26 are bearing against the front sides of grooves 28. As the grooves are sloped towards the rear, from the top downwardly, the important result is secured that a pronounced retarding effect is produced, thereby preventing the structure from slamming downwardly, thus permitting the operator to easily lower the table or seat gently into operative position.

It is to be understood that the invention is not limited to the construction herein specifically illustrated but can be embodied in other forms without departure from its spirit.

I claim:—

1. In a device of the class described, in combination with a unit having a horizontal operative position and a vertical inoperative position, a stationary upright member, having spaced uprights and grooves at opposed sides thereof, each groove with a short horizontal section at substantially the level of said unit when in operative position and also with a long section extending upwardly from the rear end of the short section and inclined toward the front of the upright member, means on said unit to engage said grooves of said upright member whereby said member may guide and retard the movement of said unit while said unit is being moved from inoperative to operative position.

2. The invention defined in claim 1, in which a strut is interposed between and hingedly connected to the unit and the lower portion of the upright member and having its lower hinge connection forward of its hinge connection to the unit in folded position, whereby the strut supports the unit in folded position and the unit tends to hold itself in folded position.

3. The invention defined in claim 1 in which a support is hinged at its upper end to the unit at a distance corresponding to its length from the outer end of said unit and is connected by a brace pivoted to said support and hinged to a strut from the upright, said support, strut and brace folding into a compact bundle back of the unit when said unit is in a vertical inoperative position.

In testimony whereof I hereto affix my signature.

BRUNO LAURIS LAURSEN.