July 11, 1944. H. HALL 2,353,331

CABINET STRUCTURE

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Fig. 1.

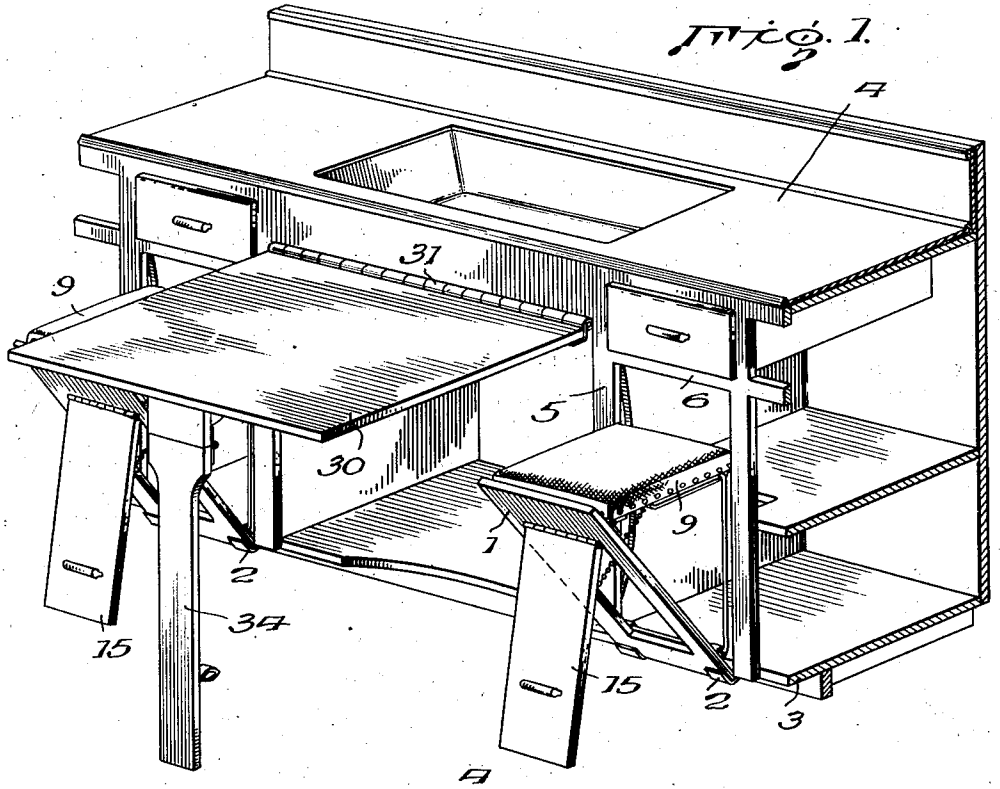
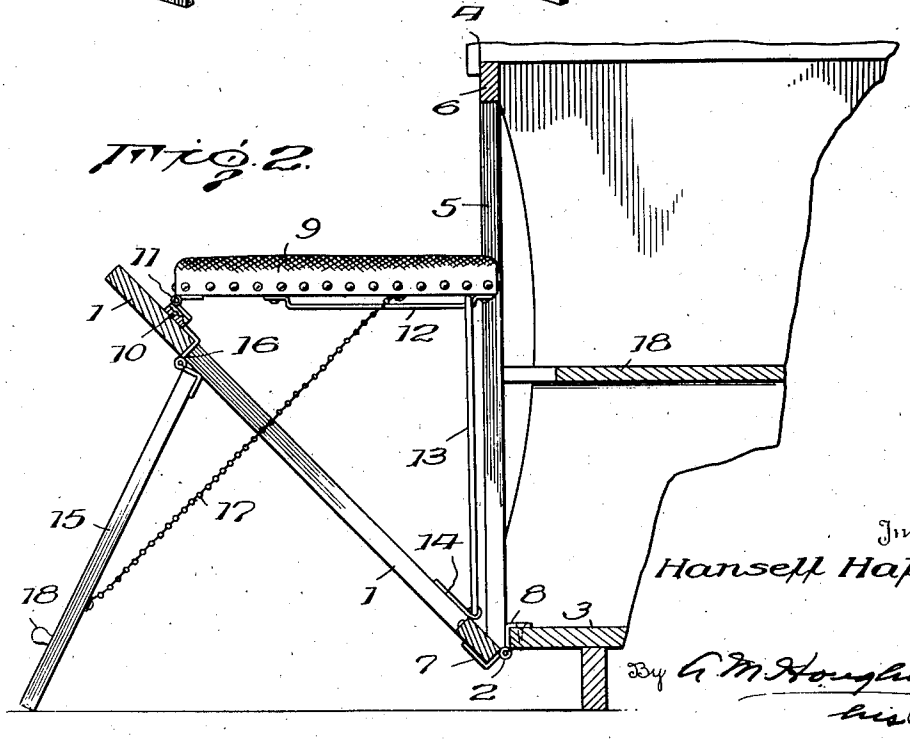


Fig. 2.



Inventor
Hansell Hall,
By G. M. Houghton
his Attorney

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Fig. 3

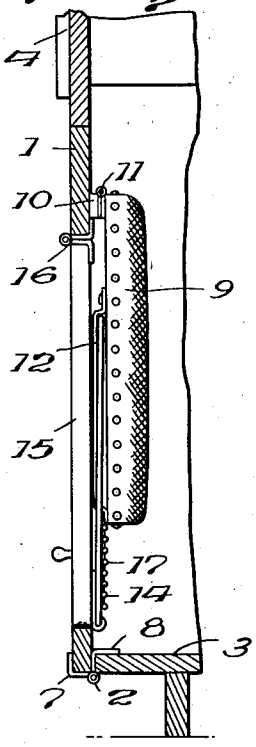


Fig. 4

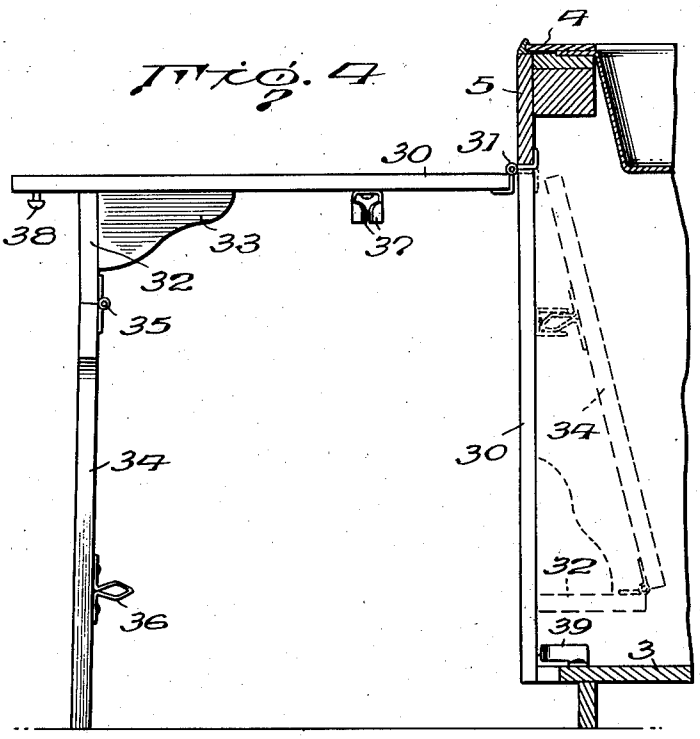
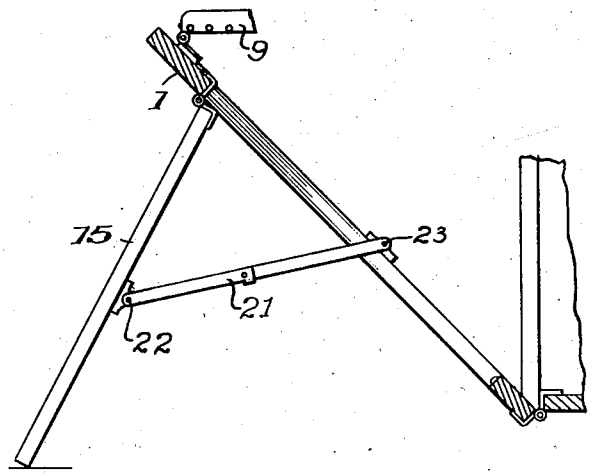


Fig. 5



Inventor

Hansell Hall,

By A. M. Houghton

his Attorney

Patented July 11, 1944 2,353,331

UNITED STATES PATENT OFFICE

2,353,331

CABINET STRUCTURE

Hansell Hall, Miami, Fla.

Application April 8, 1941, Serial No. 387,488

3 Claims. (Cl. 155—83)

This invention relates to improvements in cabinet structures, such as are commonly provided in kitchens and pantries, and more particularly to assemblies of structural members pivotally secured to the face of a wall cabinet or kitchen cabinet or the like, and adapted when in closed position to form a closure for the face of the cabinet and, when swung outwardly from the face of the cabinet, to form horizontal table or seat surfaces, with adequate supports therefor.

By means of my invention, there are provided folding tables, chairs or the like, which can be readily moved into useful position in front of a cabinet, and which are capable of being folded out of the way when desired, thus clearing the space in front of the cabinet or wall, and forming a vertical closure therefor.

The devices of my invention may be applied to cabinets of various kinds, including wall cabinets, movable and fixed kitchen cabinets, and are not limited in application to any particular form or type of cabinet.

In one modification of my invention I provide a panel member adapted to form a closure for a vertical opening in the face of the cabinet, having its lower end pivotally secured to the cabinet structure, that is to say, to a frame member forming one side of a vertical opening in the face of the cabinet, and having a folding seat member pivotally secured to the other end of the panel, in such a manner that when the panel is swung outwardly from the face of the cabinet the folding seat member may be swung into horizontal position and locked to form a seat. The device is also provided with a pivotally secured support member whereby the seat member, when swung into its outward and horizontal position may be secured in such position and provided with sufficient support to support vertical loads.

In another modification of my invention, I provide a panel member pivotally secured at its upper edge to the frame of the cabinet and adapted to be swung outwardly into a horizontal position to form a table surface. In this modification of the invention, as in the previous modification, there is attached to the end of the panel opposite the aforesaid pivotally secured end, a vertical support member adapted to form a support for the panel surface when the latter is in a horizontal position and adapted also to be swung inwardly and folded against the inner face of the panel member when the latter is returned to a vertical position, in which position it forms a closure for the face of the cabinet.

My invention has for further objects such additional improvements in structure and operative results as may hereinafter be found to obtain.

In order that my invention may be clearly set forth and understood, I now describe, with reference to the drawings attached hereto and made a part hereof, the preferred form in which my invention may be embodied. In these drawings,

Fig. 1 is a perspective view of a cabinet provided with a folding table structure and an associated folding seat structure constructed in accordance with my invention;

Fig. 2 is a vertical sectional view of a folding seat structure, as shown in Fig. 1;

Fig. 3 is a vertical sectional view of a portion of the cabinet provided with a folding seat structure, as shown in Fig. 2, the device being in this instance illustrated in the closed or folded position;

Fig. 4 is a vertical sectional view of a folding table structure as illustrated in Fig. 1;

Fig. 5 is a vertical elevational view of an alternative support for a seat structure as illustrated in Figure 2.

Similar reference numerals indicate similar parts in the several views of the drawings.

Referring now to Figs. 1, 2 and 3, there is shown a panel member 1 pivotally secured at its lower end by means of a hinge 2 to a horizontal frame member 3 forming a part of a cabinet 4 of more or less conventional design and adapted when swung into a vertical position, as shown in Fig. 3, to form a closure for a vertical opening in the face of the cabinet framed by structural members 5 and 6.

While various forms of hinges may be used, that illustrated in the drawings is of especial advantage. This hinge member 2, as shown, is provided with two leaves 7 and 8, respectively, each bent to a right angle. The leaf 7 is secured by suitable fastening means to the lower edge of the panel 1 in such a manner that the panel 1 fits into the right angle formed by the leaf 7, while the leaf 8 is suitably attached to the horizontal member 3 along the upper edge thereof. The bent portions of the leaves 7 and 8 thus serve to carry a large part of the load, thereby preventing the entire load from being carried by the screws or other fastening members and resulting in a firmer and stronger construction than would be true if the conventional type of hinge were employed.

A seat member 9 is pivotally secured by means of a cross block 10 and a hinge 11 to the upper end of the panel 1 and is preferably upholstered, as shown. The seat member 9 is provided with a pair of guide rods 12 spaced from the lower portion of the seat member 9 and adapted to guide and restrain the upper, inwardly bent ends of a more or less U-shaped support rod 13, which is pivotally secured by means of eyes 14 to the lower part of the panel 1.

The central part of the panel 1 is cut out to form a separate support panel 15, which is secured at its upper end to the panel 1 by means of a hinge 16.

The panel 15 is connected to the seat 9 by means of a chain 17, or other suitable restraining device, and it is also conveniently provided with a handle 18.

As will be seen from a comparison of Figs. 2 and 3, the construction is such that when the device is in the closed position the panel 1 forms a closure for the vertical opening in the face of the cabinet 4, and the panel 15 in turn forms a vertical closure in the face of the panel 1, while the seat 9 and supporting rod 13 occupy vertical positions adjacent to the inner surfaces of the panels 1 and 15. A latch (not shown) may readily be provided in the cabinet structure for retaining the device in the position illustrated in Fig. 3, or the construction may simply be such that the panel 1 fits sufficiently closely into the opening formed by the structural members of the cabinet to retain the same in this position.

In this position, as illustrated in Fig. 3, the device occupies very little of the space inside the cabinet, thus making it possible to provide internally disposed shelves such as that illustrated at 18, and the face or surface of the cabinet is closed and free from external obstructions other than the handle 18.

When it is desired to use the device as a seat, it is simply necessary to grasp the handle 18 and pull it outwardly, and to erect the seat 9 by swinging the support rod 13 into a vertical position, as shown in Fig. 2. The panel 1 swings outwardly until it is restrained by the combined action of the panel 15, the chain 17, the seat 9 and the support rod 13, the outer and lower end of the panel 15 resting on the floor. The structure thus provides a strong support for the seat 9 when in the erected position, as shown in Fig. 2. In lieu of the chain 17, outward movement of the panel 15 may be restrained, as shown in Fig. 5, by means of a foldable brace stop device 21 of more or less conventional design, the outer ends of the opposite arms of the device 21 being attached to the panel 15 and the panel 1, by means of hinged fastenings 22 and 23, respectively. The construction of the device is such that it readily folds out of the way when the panels 15 and 1 are swung into a vertical position, but moves into the rigid or locked position shown in Fig. 5 when the seat structure is withdrawn from the cabinet and erected.

As shown in these figures, there is provided a panel member 30, the upper end of which is pivotally attached by means of a hinge 31 to the face member 5 of the cabinet 4. The hinge 31 is similar to the hinge illustrated in Fig. 2 but in this case the leaves are bent in the opposite direction, thereby serving to carry the load of the panel 30 more securely than would be the case were a conventional type of flat-leaf hinge to be employed. At the lower and inner end of the panel 30 there is provided a knee panel 32 which is supported from the panel 30 by means of suitable braces 33. The knee panel 32 is pivotally attached at the end opposite the panel 30 to a leg 34 in such manner that when the panel 30 is swung outwardly from the cabinet into a horizontal position, the leg 34 may be lowered to a vertical position, or preferably to a position just past the vertical, as shown, being restrained in this position by the combined action of the knee panel 32 and the hinge 35.

Interlocking latch members 36 and 37 are attached to the leg 34 and the panel 30, respectively, in such a manner as to form a friction catch. Additional latch members 38 and 39 are attached to the panel 30 and the frame member 3, respectively, to form a friction catch for the panel structure as a whole.

As illustrated in Fig. 4, the full lines illustrate the position of the table structure when in open position, while the broken lines show the folded position of the same, in which position the panel 30 serves as a vertical closure for the opening in the face of the cabinet.

The devices illustrated have the advantage of simplicity in construction, rigidity and convenience, and are useful in providing seating and working spaces for cabinets, in rooms where space is restricted.

While I have illustrated and described my invention hereinabove in connection with various illustrative examples and details, it will be understood that my invention in its broader aspects is not limited to the minor structural details illustrated, but may be variously practiced and embodied within the scope of the claims hereinafter made.

What I claim is:

1. In a cabinet structure, frame members forming a vertical opening in the face of the cabinet, a panel member adapted, when in vertical position, to form a closure for said opening and pivotally secured at its bottom to the cabinet frame, and adapted to be swung outwardly from the frame, a seat pivotally attached to the opposite end of said panel and adapted to be swung into a horizontal position when the panel has been swung outwardly away from the opening, means for holding the seat in said horizontal position, a rigid member pivotally secured to said opposite end of said panel and adapted to form a support therefor and means for limiting movement of said rigid member relative to said panel.

2. In a cabinet structure, frame members forming a vertical opening in the face of the cabinet, a panel member adapted, when in vertical position, to form a closure for said opening, pivotally secured at its bottom to the cabinet frame, and adapted to be swung outwardly from the frame, a seat pivotally attached to the opposite end of said panel, means for holding said seat in a horizontal position when said panel member has been swung outwardly from the frame, a rigid member pivotally secured to said opposite end of said panel and adapted to form a support therefor, and collapsible means for limiting movement of said rigid member relative to said panel.

3. In a cabinet structure, frame members forming a vertical opening in the face of the cabinet, a panel member adapted, when in vertical position, to form a closure for said opening, pivotally secured at its bottom to the cabinet frame and being adapted to be swung outwardly from the frame, a rigid member pivotally secured to said opposite end of said panel and adapted to form a support therefor, and means for limiting movement of said rigid member relative to said panel, a seat member pivotally secured to said opposite end of said panel, and a movable support mounted on said panel member and movable to supporting position with respect to said seat.

HANSELL HALL.