No. 884,550.

PATENTED APR. 14, 1908.

J. F. WILMOT.

SECTIONAL KNOCKDOWN CABINET.

APPLICATION FILED MAY 24, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

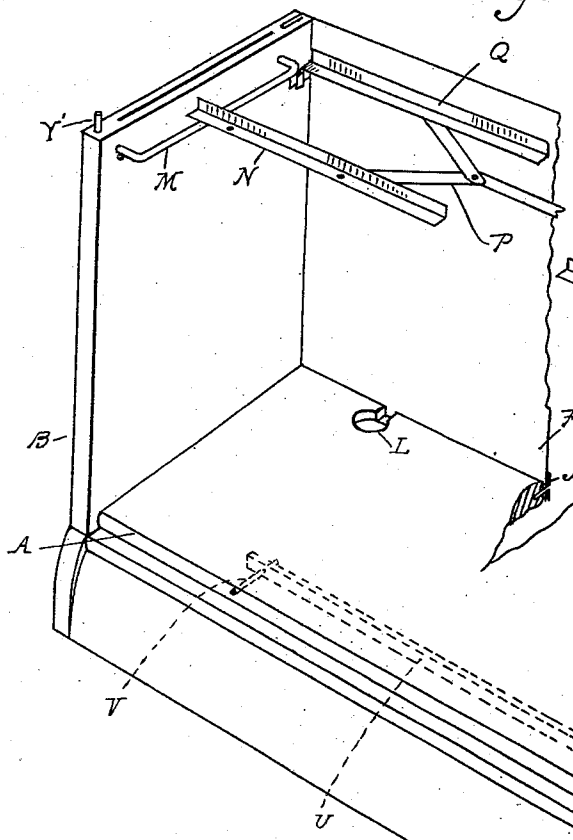


Fig. 1a.

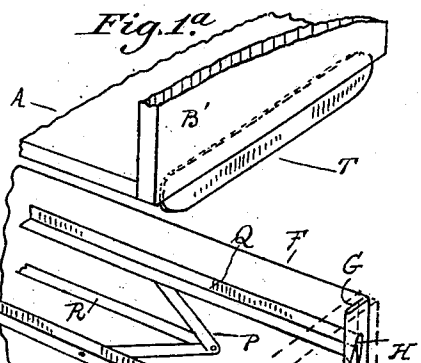
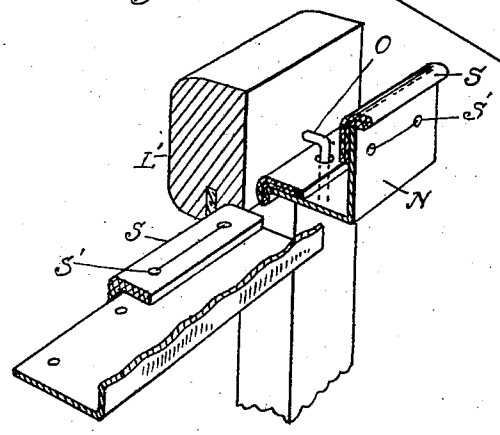


Fig. 7.



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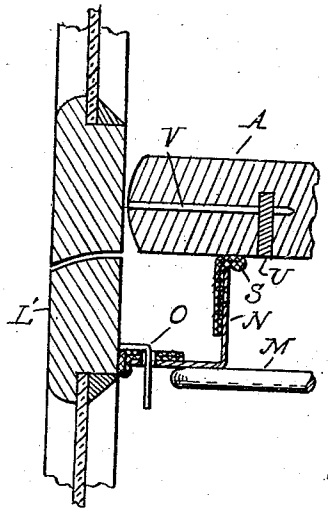
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2 SHEETS—SHEET 2.

Fig. 2.



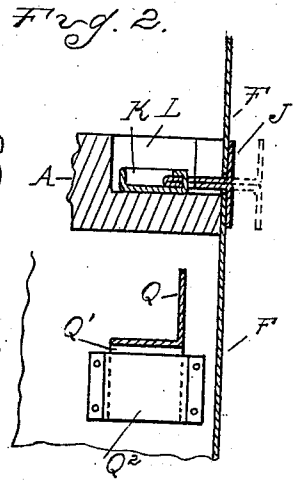


Fig. 3.

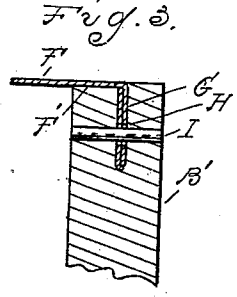


Fig. 4.

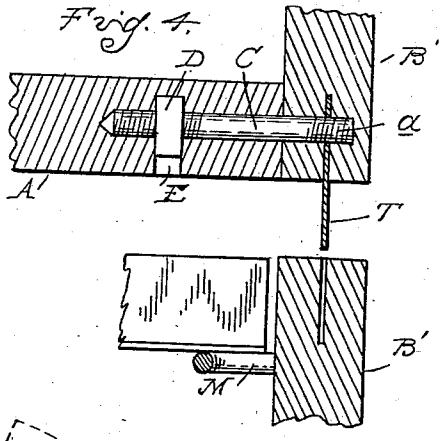


Fig. 5.

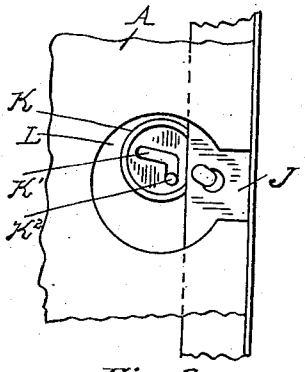


Fig. 8.

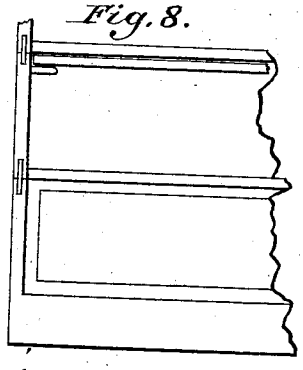
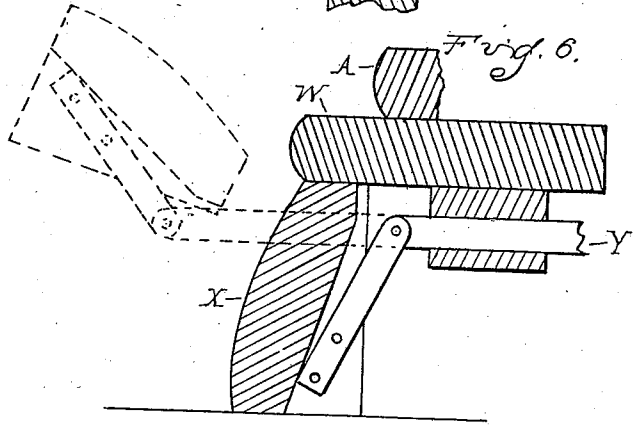


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN F. WILMOT, OF DETROIT, MICHIGAN.

SECTIONAL KNOCKDOWN CABINET.

No. 884,550. Specification of Letters Patent. Patented April 14, 1908.

Application filed May 24, 1907. Serial No. 375,496.

To all whom it may concern:

Be it known that I, JOHN F. WILMOT, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Sectional Knockdown Cabinets, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to knock-down cabinets, and is more particularly designed for use with a construction of sectional book cases, although certain features of the construction are applicable to other uses.

It is the object of the invention to obtain a construction which may be shipped in knock-down form, and readily assembled without the exercise of great mechanical skill.

It is a further object to obtain a construction which is practically dust proof, and in which each section forms a strong and rigid construction, and which is capable of being moved about without disturbing the contents.

With these, and other objects, in view, the invention consists in certain features of construction as hereinafter set forth.

In the drawings, Figure 1 is a perspective view of one section of the case with the hinged front detached; Fig. 1[a] is a fragmentary perspective view of the lower end of a section; Fig. 2 is a cross section through the adjoining portions of two sections of the case; Fig. 3 is a horizontal section illustrating the connection between the back and one of the sides of the case; Fig. 4 is a vertical longitudinal section illustrating the connection between the sides and shelf of the case section, and also the engagement between superposed sections; Fig. 5 is a plan view of the locking device for securing the back plates to the shelf; Fig. 6 is a cross section through the base. Fig. 7 is a sectional perspective view illustrating the hinged connection between the door and the slidable bar to which it is attached, and also the means for securing the packing strips to said bar. Fig. 8 is a broken front elevation of a plurality of superposed sections.

My construction belongs to that type of sectional cases in which a variable number of sections or units may be arranged in superposed relation in connection with a suitable base and top section.

Each unit or section of my improved construction is so formed that it may be shipped or stored in knock-down condition, and is constructed as follows: A is a shelf and B B′ end sections connected therewith. These end sections are preferably attached to the shelf, as illustrated in Fig. 4, by means of bolts C. These bolts are anchored at one end in the side sections B′, and are adapted to engage sockets in the ends of the shelf section, and nuts D arranged in recesses E therein. Thus the sides and the shelf may be quickly attached by inserting the bolts, and screwing up the nuts D. The back section F is secured to the shelf and side sections by being provided with flanges G at opposite ends thereof, which engage kerfs in the rear edges of the sides. This back F is preferably formed of sheet metal, and the flanges are integral parts thereof, preferably reinforced by folding to form a double ply. These flanges are also cut away at H to form hooks for engaging pins I set in the sides and extending through the kerfs, as illustrated in Fig. 3. The backs F are also attached to the rear edges of the shelves A so as to form a dust proof connection therewith. This connection comprises a flanged bar J, preferably a T-bar, the web portion of which engages a kerf in the rear edge of the shelf, and the flanges of which overlap the edges of the backs above and below said shelf.

For facilitating engagement, the bar J is adjustable in the kerf of the shelf, and is preferably provided with means of attachment which may be operated from the front of the case. This, as shown in Figs. 2 and 5, comprises a catch K attached to the web of the bar, and arranged in a recess L in the shelf into which the fingers of the operator may be inserted for moving the catch. As shown, the catch is provided with an L-shaped slot K′, through which a pin K[2] is inserted, and the arrangement is such that a movement in one direction will lock the bar J in close proximity to the rear edge of the shelf, while a movement in the opposite direction will disengage the catch, and permit said bar to be moved rearward.

The shelf, sides and back section described constitute the rigid elements of each section or unit of the case, and it will be observed that by reason of the flanged engagement of the back section with the kerfed edges of the sides a strong brace is formed for holding the structure rigid and rectangular. The unit is completed by a front section L′, preferably a glass panel door, which is adapted to be

swung upward and slid into the upper portion of the section when the latter is opened. Doors of this character, as heretofore constructed are often difficult to operate due to their liability to become skewed in sliding in or out of the case, and consequently binding. This difficulty I have overcome by a door guide of the following construction.

M are rods or guide rails arranged across the inner faces of the sides of the case near the upper edges thereof.

N is a bar extending longitudinally of the case with its opposite ends resting upon the guides M. To this bar the door or front L′ is hinged, preferably by hooks O passing through apertures in the bar.

P are toggles connecting the bar N with a parallelly arranged bar Q, which is normally adjacent to the back of the case, and is secured in position by suitable means, as hooks Q′, engaging brackets Q^2 upon the sides B B′.

The construction just described is such that the bar N may be slid inward or outward upon the guides M by folding or straightening the toggles P. The knuckles of these toggles are, however, held a fixed distance from each other by a connecting link R, and as a consequence both ends of the bar N are compelled to move together, constantly maintaining its parallelism with the bar Q. As the door L′ is hinged to the bar N it is evident that it also will be held in parallelism to the bar Q so as to prevent possibility of skewing or the binding of its opposite edges against the sides B B′.

The bar N, in addition to forming a hinged support and guide for the door, performs the further function of a dust guard for sealing the joint between the door and the shelf. To this end the bar N is preferably an angle bar, and has attached to its flanges strips of felt or other packing material, S. One of these strips presses against the under side of the shelf, while the other strip bears against the inner face of the door rail, as illustrated in Fig. 2. Still a further function performed by the bar N is to form an air cushion within the case for preventing the slamming of the door, if dropped when in raised position. It will be understood that the door in dropping forces an air current into the case, but, as ordinarily constructed, there is sufficient clearance between the hinged edge and the upper shelf to permit this air to escape. With my construction, this joint is sealed by the packing strip S, and consequently an air cushion is formed which will lessen the impact of the door against the case.

By using an angle bar for the bar N it may be entirely concealed behind the upper rail of the door, and at the same time provide space for receiving said rail when the door is swung up into horizontal position and prevents the hooks from disengaging in pressing the door inward. Furthermore, the angle shape imparts strength and rigidity to the bar, which is desirable.

For uniting superposed units, tongues are provided on each section, which engage kerfs on the adjacent section, forming a tongue and grooved joint therewith. These tongues T are preferably formed of sheet steel, and are secured to the lower ends of the side sections B B′. For securing in position, they are preferably inserted in kerfs in the lower edges of said sides, and are locked therein by engagement with the bolt C. I preferably employ these tongues for the further function of forming the anchors for the bolts C, and to this end said bolts are provided with a threaded portion *a*, which may be engaged with threaded apertures in the tongues T, as illustrated in Fig. 4.

When the series of units are assembled, the shelves of the upper and intermediate units derive their support from the sides. To prevent danger of springing down at the center, I preferably truss these shelves, and this is accomplished by grooving the under face, near the front edge, and inserting a bar U, arranged on edge, as illustrated in Fig. 2. This truss bar need not extend the entire length of the shelf, but only a portion thereof, as indicated by dotted lines in Fig. 1. The bar is anchored in the shelf by suitable means, such as the pins V, driven in from the edge of the shelf and engaging apertures in the bar.

It is usual to form the base for supporting a series of units with closed front and sides, extending to the floor. In the cleaning of the floor, the mop or brush is frequently brought into contact with the finished surface of the base so as to soon destroy the polish. I have therefore provided the base section W with a movable front panel X, which normally extends to the floor, but which may be turned up when the floor is cleaned.

Any suitable form of attachment may be employed, but, as shown, I provide a pair of links Y, to which the front section X is pivoted, and which permits it to be first drawn outward and then turned up, as illustrated in Fig. 6.

With the construction as described, when the case is to be stored or shipped, the several pieces composing each unit or section may be disconnected. To assemble the case, the sides B B′ are first attached to the shelf A by engaging the bolts C with the nuts in the recesses E. The back F is then engaged with the sides by inserting the flanges G in the kerfs in said sides, and engaging the hooks H with the pins I. The bars N and Q are permanently attached to each other by the toggle links P, but may be detached or attached to the case by the engagement of the hooks Q′ with the brackets Q^2. The door L′ is attached to the bar N by the hooks O.

Where a number of units are arranged in superposed relation, they may be succes-

sively engaged with each other by inserting the steel tongues T into the kerfs of the lower section, and to insure accurate alinement of the front edges of the sides I preferably provide dowel pins Y′. Before engaging the sections, the T-bar J for the upper section is adjusted rearward, so as to permit the back of the lower section to be inserted between the flanges of said bar and the rear edge of the shelf. The T-bar is then drawn forward, by operating the catches K in the manner previously described, and this will form a dust tight joint between the two sections.

The hinge hooks O for the door L′ are preferably located opposite the side rails of the door, so that they are concealed by these rails from view. The packing strips S are attached to the bar N by any suitable means, but preferably by providing the bar with a series of apertures S′ therein, permitting of sewing the strips in position.

In order that the back F may be flush with the rear edges of the sides, I preferably rabbet said sides, as at F′, between the kerf for receiving the flange G and the inner edge. This will provide a sufficient recess to receive the thickness of the back, as illustrated in Fig. 3.

What I claim as my invention is:

1. In a sectional cabinet, a unit comprising a shelf, vertical sides connected at their lower ends to the opposite ends of said shelf, means of engagement between said sides and the sides of an adjacent section or unit, a back detachably engaging the rear edges of said sides, and means for detachably clamping the backs of adjacent sections to the rear edge of the intermediate shelf and intermediate the ends thereof.

2. In a knock-down sectional cabinet, the combination with a shelf and a vertical side, of a tongue engaging a kerf in said side and projecting for engagement with a registering kerf of the side of an adjacent section, a stud anchored in the side by a threaded engagement with said tongue and projecting inward therefrom into a socket in the end of said shelf, and a nut for engaging a threaded portion of said stud located in a recess in the under side of said shelf.

3. In a sectional cabinet, a section comprising a shelf, vertical sides and a back secured to said shelf, a flat metallic bar arranged on edge and secured in a recess in the under side of said shelf adjacent to the front edge thereof, and anchors for securing the ends of said bar to the shelf located at a point intermediate the center of the shelf and the ends thereof.

4. In a sectional cabinet, a section comprising a shelf, vertical sides attached thereto, a back, and connecting means for said back engaging kerfs in said sides and shelf.

5. In a sectional cabinet, a section comprising a shelf and sides, a back provided with inturned flanges at its opposite ends engaging kerfs in the rear edges of said sides, and means for locking said flanges in said kerfs.

6. In a sectional cabinet, a section comprising a shelf, sides attached thereto, a back provided with inturned flanges at its opposite ends engaging kerfs in the rear edges of said sides, and hooks formed in said flanges for engaging keepers in said kerfs.

7. In a sectional cabinet, a section comprising a body portion and a back, and a securing device therefor, comprising a bar having a longitudinal flange laterally adjustably engaging a kerf in the rear edge of said body portion, and a second flange in a plane parallel to said back overlapping the edge of the back.

8. In a sectional cabinet, a section comprising a body portion including a shelf and sides, a back, and a securing means comprising a bar having a longitudinal flange engaging a kerf in the rear edge of said body portion, and a second flange in a plane parallel to said back overlapping the edge of said back, and means operable from the front for clamping said bar against the back.

9. In a sectional cabinet, a plurality of superposed sections, each comprising a shelf, sides, and back, and adjustable means for detachably clamping the backs of adjacent sections to the rear edge of the intermediate shelf.

10. In a sectional cabinet, the combination with a plurality of sections, each comprising a shelf, sides and back, of a flanged bar adjustably engaging a kerf in the rear edge of the intermediate shelf and overlapping the adjacent edges of the backs.

11. In a sectional cabinet, the combination with a plurality of superposed sections, each comprising a shelf, sides and a back, of a T-bar having its stem adjustably engaging a kerf in the rear edge of the intermediate shelf with its flanges overlapping the adjacent edges of the backs.

12. In a sectional cabinet, the combination with a plurality of superposed sections, each comprising a shelf, sides, and a back, of a T-bar engaging a kerf in the rear edge of the intermediate shelf, and having its flanges overlapping the adjacent edges of the backs, and means operable from the front for drawing said bar inward in said kerf and clamping said backs.

13. In a cabinet, the combination with a door hinged at its upper edge, of a bar to which said door is hinged laterally adjustably secured within said cabinet, and packing material for sealing the joint between said door and bar secured to the latter.

14. In a cabinet, the combination with a shelf and parallel sides, of a bar slidable between said sides beneath said shelf, a door hinged to said bar, and means for packing

the joint between said bar and said door and shelf, secured to said bar.

15. In a cabinet, the combination with a shelf and parallel sides, of a hinged door and an angle bar to which said door is hinged adjustable beneath said shelf, the space within the angle of the bar receiving the edge of said door when in its rearward position of adjustment.

16. In a cabinet, the combination with a shelf and parallel sides, of a hinged door and an angle bar to which said door is hinged laterally adjustable beneath said shelf, the space within the angle of the bar receiving the edge of said door in its horizontal position, and packing material secured to the flanges of said angle bar and sealing the joint between said bar and the shelf and door respectively.

17. In a sectional cabinet, a section comprising a shelf and sides, a back provided with an inturned flange at one end thereof for engaging a kerf in the rear edge of a side, and means for locking said flange in said kerf.

18. In a cabinet, the combination with a shelf and parallel sides, of a bar laterally slidable between said sides beneath said shelf, a door hinged to said bar, and packing material secured to said bar by sewing through apertures therein.

19. In a cabinet, the combination with a shelf and parallel sides, of an angle bar laterally slidable between said sides beneath said shelf, and a door having a hook engaging an aperture in the flange of said angle bar forming a hinged connection thereto permitting of turning the adjacent rail of the door into the recess of the angle.

20. In a cabinet, the combination with a shelf and parallel sides, of a bar laterally slidable between said sides beneath said shelf, a door and a hook forming a hinged connection between said door and bar engaging an aperture in the latter, and located to be concealed behind the side rail of the door.

21. In a cabinet, the combination with a shelf and parallel sides, of an angle bar laterally slidable between said sides beneath said shelf, one of the flanges of said bar being arranged horizontally and projecting forwardly and the other flange projecting vertically upward, a door having its top rail adapted to fit the recess within said angle bar, and a hook on said rail engaging an aperture in the horizontal flange of said bar, the upper edge of the rail being adapted to abut against said vertical flange when said door is in horizontal position and said rail is in the recess of said bar, whereby disengagement of said hook is prevented.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. WILMOT.

Witnesses:
NELLIE KINSELLA,
JAMES P. BARRY.