F. P. WILLIAMS.

SHEET METAL CABINET.

APPLICATION FILED MAY 2, 1921. RENEWED APR. 10, 1922.

1,419,481. Patented June 13, 1922.

3 SHEETS—SHEET 1.

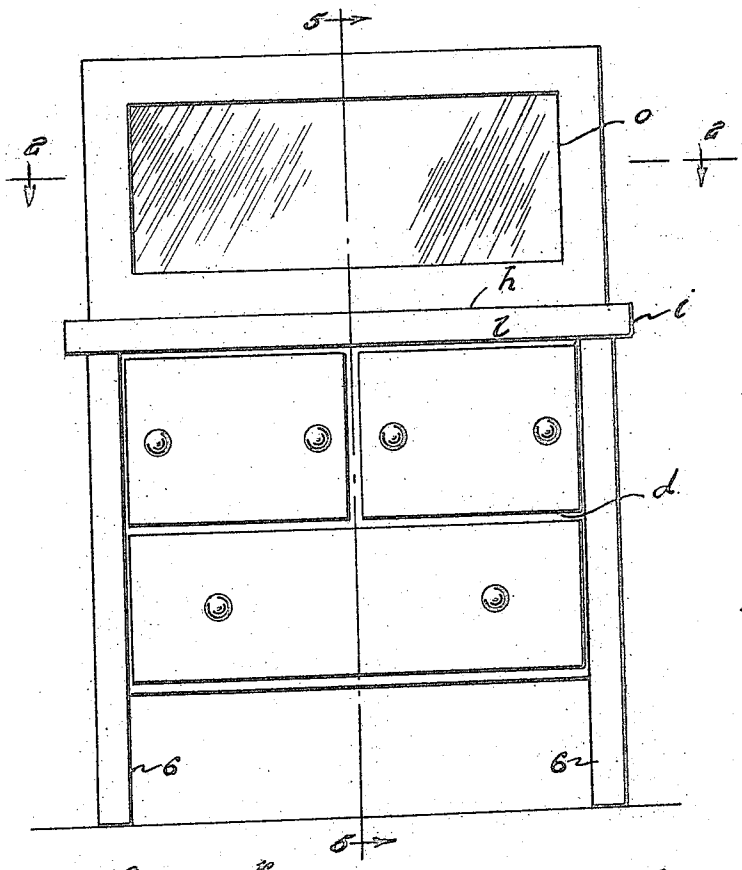


Fig. 1

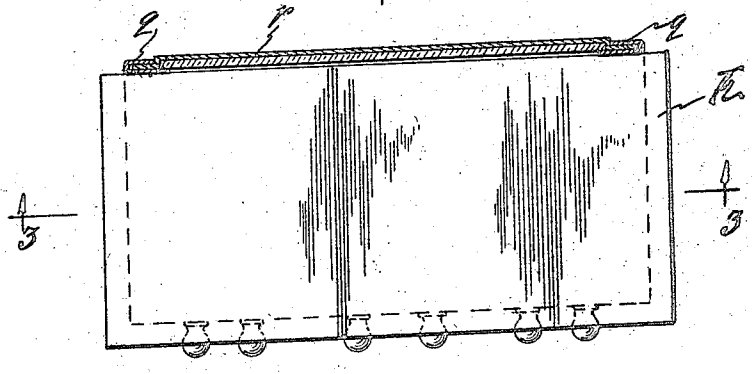


Fig. 2

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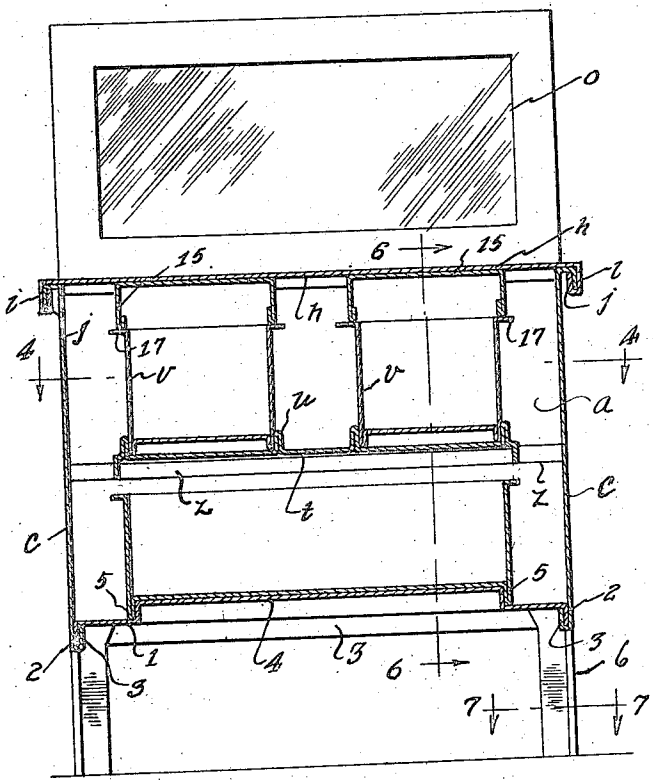


Fig. 3

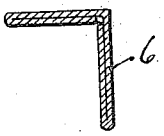


Fig. 7

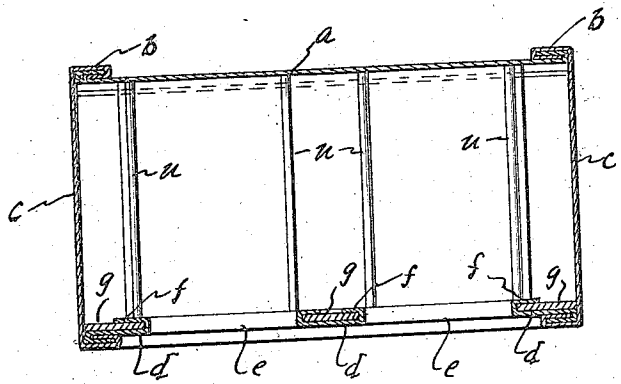


Fig. 4

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3 SHEETS—SHEET 3.

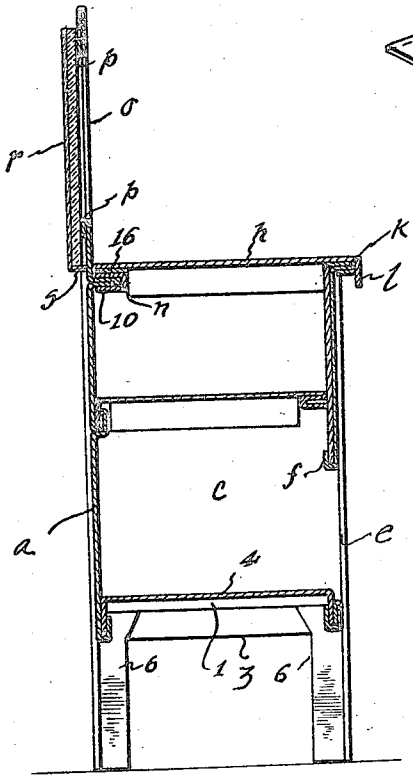


Fig. 5

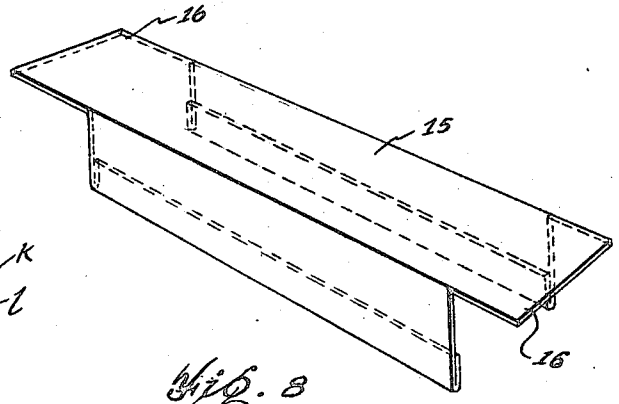


Fig. 8

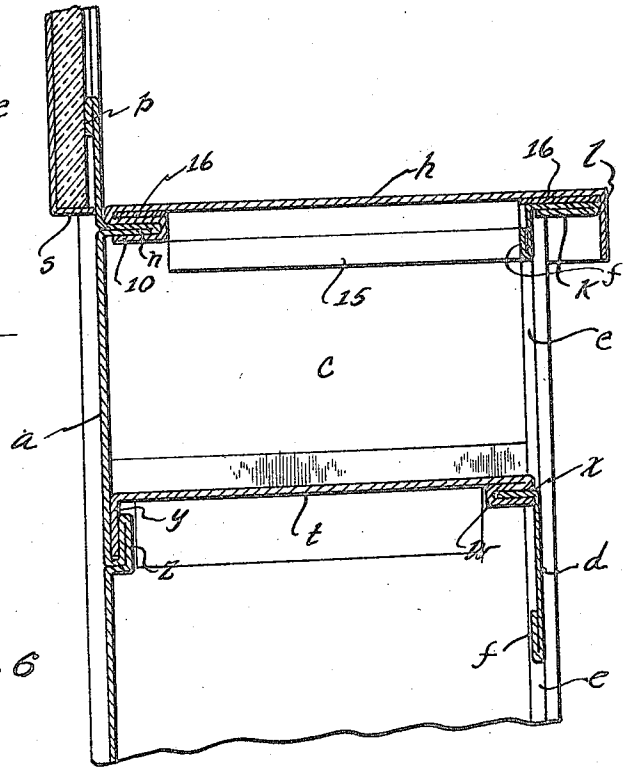


Fig. 6

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UNITED STATES PATENT OFFICE.

FRANK P. WILLIAMS, OF DETROIT, MICHIGAN.

SHEET-METAL CABINET.

1,419,481. Specification of Letters Patent. Patented June 13, 1922.

Application filed May 2, 1921, Serial No. 466,004. Renewed April 10, 1922. Serial No. 551,422.

To all whom it may concern:

Be it known that I, FRANK P. WILLIAMS, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Sheet-Metal Cabinets, of which the following is a specification.

This invention relates to sheet metal cabinets, and has for its object a sheet metal cabinet that may be constructed almost wholly of folded sheet metal and which may be used for various uses, such as a chiffonier, buffet bureau, or the like. Its advantages will be better appreciated after the detail construction is understood.

In the drawings,—

Fig. 1 is a front elevation of the cabinet in the form of a bureau.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig 4 is a section on the line 4—4 of Fig. 3 (the drawers being omitted).

Fig. 5 is a section on the line 5—5 of Fig. 1 (the drawers being omitted).

Fig. 6 is a cross section on the line 6—6 of Fig. 3 (the drawers being omitted).

Fig. 7 is a section taken on the line 7—7 of Fig. 3.

Fig 8 is a perspective of the top reinforcing channel

The cabinet comprises a body made up of a rear plate *a* provided with outwardly and backwardly turned lock-seam folds that slide into lock-seam relation with the right-angular lock-seam folds *b* of the side plates *c*. The front plate *d* locks into the right-angular front lock-seam folds of the side plates in precisely the same manner that the rear plate does. This front plate *d*, however, is provided with drawer openings *e* which have turned-back strips *f* (Fig. 4) which fold over the upwardly-extending reinforcing strips *g* of heavier gauge metal so as to reinforce the front, which would otherwise be weak by reason of the large amount of drawer opening therein.

The top of the cabinet is formed by a sheet of metal *h* which has right-angularly turned-down lock-seam folds *i* which can be slid from front to rear over the box-like folds *j* turned over from the top of the side plates. The front plate is provided with a forwardly-projecting fold *k* at the top against which engages the turned-down flange *l* of the top sheet *h*. The rear plate *a* has a forwardly-projecting fold perpendicular thereto designated *n*. This serves as a ledge to support the top sheet *h* at the back, the top sheet being provided with a reversely located lock-seam fold 10 to lock over this ledge. The top sheet *h* is prevented from buckling or dropping down at the center by the strengthening channels 15 (see Fig. 8). These are simply sheet metal channels with flat end extensions 16 which at the front engage in between the top sheet and the fold *k* and at the rear engage in between the lock-seam fold 10 and the main body of the top sheet. These reinforcing strips 15 also serve as assistants in guiding the drawers, as they engage the turned-over flanges 17 of the drawers (see Fig. 3) and hence prevent the drawers tipping up and guide the drawers at the top.

The rear plate *a* extends up above the top of the cabinet body for the purpose of affording a mirror support. It is provided with an opening *o* which has the portions around the opening turned back as at *p* to make a finished edge for the metal at the opening. The sides of the rear plate *a* above the body are turned back to form folds *q* (Fig. 2) which receive the edges of the shallow channel sheet *r* to lock the same in place. This channel sheet *r* has a flange *s* turned into the rear plate at the bottom to support the glass at the bottom. The glass simply slips into this channel sheet between the channel sheet and the rear plate, as is plainly shown in Fig. 2.

The upper drawer support is a four-times-ribbed sheet *t*, the ribs *u* being formed simply by doubling the metal at the required place. These ribs are arranged in spaced pairs to guide the sheet metal drawers *v* which will not be described here in detail as they are made the subject of a separate application. This drawer support is provided at the front with a reversed lock-seam fold *w* which can be hooked into the rearwardly-extending flange *x* at the bottom of the drawer opening. At the rear the drawer support is provided with a downwardly-depending flange *y* that can be dropped into the fold *z* made in the body of the rear plate and which is turned over parallel with the main plane of the plate and opens upwardly.

This securely locks the drawer support in place without the aid of any separate fastening device.

The lower drawer support comprises simply a plate 1 with turned-down flanges 2 on all four edges that simply drop into turned-up folds 3 of the sides, front and rear plates. At the center the plate is bossed or raised to form the drawer guide 4. Where this guide joins the remaining part of the supporting plate a step is formed over which the depending flanges 5 of the drawer rest. These two steps act as a guide for the drawer against lateral displacement while the main body of the drawer support acts as a rest for the drawer.

The legs 6 are simply continuations of the side plates but folded double as is shown in Fig. 7 to reinforce them and give them sufficient stability.

From the above description it will be apparent that this cabinet is made solely of sheet metal (outside of the mirror and knobs) and that this sheet metal can all be fashioned on a large production scale by dies and presses. This, therefore, affords an article of furniture that lends itself to production at a very small cost and at the same time, by reason of the way the parts are joined together, it affords a knock-down piece of furniture which, if need be for economy, may be shipped in knock-down condition to its destination. The use of the cabinet is not alone confined to bed-room furniture or to a buffet but manifestly there are a great many other uses, such as kitchen cabinets that could be included within the possibilities of the article.

What I claim is:

1. In a sheet metal cabinet, front and rear plates having turned-over or folded edges, side plates having turned-over edges that are adapted to engage the folds of the front and rear plates to lock the said plates together, some of said plates being provided each with continuations folded longitudinally and medianly into an angular cross section to form supporting legs.

2. In a sheet metal cabinet, the combination of front and rear plates having turned-back edge portions forming lock-seam folds at the sides, and side plates having perpendicularly-formed folds forming folds adapted to lock into the folds of the front and rear plates to complete the lock-seams at the corners, said folds of some of said plates continuing down below the main body of the cabinet with folded continuations forming legs at the corners of the cabinet.

3. In a sheet metal cabinet, the combination of front and rear plates having turned-back side edge portions to form portions of lock-seams, and side plates having perpendicular folds adapted to engage the folds of the front and rear plates to complete the lock-seam, the said side plates being provided with continuations down below the main body of the cabinet in the form of strips continuing the corners longitudinally and medianly folded and also folded back upon themselves on the inside to reinforce the legs.

4. In a sheet metal cabinet, the combination of front and rear plates, the latter extending considerably above the former and being provided with a perpendicularly and forwardly projected fold, side plates connected with the front and rear plates, and a top sheet of metal adapted to be slid over the tops of the side plates and having its rear portion supported on the fold of the back plate as a ledge.

5. In a sheet metal cabinet, the combination of side, front and rear plates, the rear plate extending considerably above the front plate being provided with a perpendicularly and forwardly extending fold, the front plate being likewise provided with a forwardly-extending fold, and a top sheet adapted to engage over the tops of the side plates and to rest on the folds at the front and rear plates.

6. In a sheet metal cabinet, the combination of a front plate provided with a drawer opening, a rear plate provided with a fold horizontally extending across the rear plate and bent back parallel thereto so as to be opening upwardly, and a draw support in the form of a plate supported by the front plate and having a turned-down flange adapted to be forced into the upwardly-extending folded portion of the rear plate.

7. In a sheet metal cabinet, the combination of a front plate provided with a drawer opening having a flange turned-back at the bottom of the drawer opening and extending perpendicularly therefrom rearwardly, a rear plate having a horizontal fold upwardly directed parallel with the plate and opening upwardly, and a drawer support in the form of a plate having a reversely-positioned lock-seam fold at the front adapted to hook into the rearwardly-extending flange at the drawer opening and having a downwardly-extending flange at the back adapted to be slid into the upwardly-extending folded portion of the rear plate.

8. In a sheet metal cabinet, the combination of front, rear and side walls secured together at their edges and having their bottom edges turned up into folds, and a drawer support comprising a plate having turned-down edges locking in the said folds and having its center portion forced up into a boss forming steps where the center portion joins the remaining portion of the plate, which steps serve to act as a guide for a drawer with depending side portions.

9. In a sheet metal cabinet, a plate having an opening therethrough and having its side

edges turned back, a shallow channel sheet having turned-out flanges locked under the turned-back edge portions of the plate and having at its bottom a turned-in flange, said shallow channel sheet being located behind the opening in the said plate and adapted for serving as a support for a mirror.

10. In a sheet metal cabinet, the combination of side, front and rear plates connected together, a top sheet supported by the same, and a reinforcing member lying under the top sheet for preventing the sagging of the center of the same.

11. In a sheet metal cabinet, the combination of side, front and rear plates connected together, a top sheet supported upon the tops of the same, and a reinforcing channel for preventing the sagging of the top sheet and bridging across from one plate to the opposite plate.

12. In a sheet metal cabinet, the combination of side, front and rear plates, the rear plate being provided with a forwardly-projecting fold, the front plate being provided with a forwardly-projecting fold, a top sheet adapted to rest over the tops of the side plates and front plate and provided at its rear with a reversely-facing lock-seam fold adapted to engage over the forwardly-projecting fold of the rear plate, and a channel reinforcing member having flattened ends, the rear end locking in between the lock-seam fold and the main body of the top sheet and the front end locking in between the top sheet and the forwardly-projecting fold of the front plate.

13. In a sheet metal cabinet, the combination of front, side and rear plates all connected together, the front plate provided with drawer openings, a top sheet supported upon the said plates, and a reinforcing sheet metal member in the form of a channel underlying said top sheet and having the channel wall edges in position to engage the top edges of the drawing to act as a guide for the top of the drawer.

In testimony whereof I affix my signature.

FRANK P. WILLIAMS.