Nov. 18, 1924. 1,516,156

F. A. SCHMITZ

BRACE FOR SUPPORTING CROSSBARS OF FILING CABINETS

Original Filed May 25, 1921 2 Sheets-Sheet 1

Fig. 1.

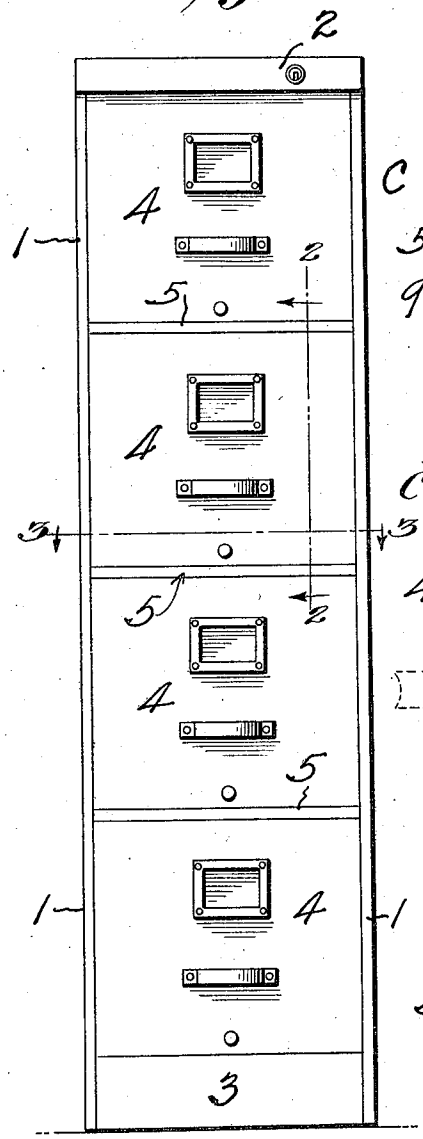

Fig. 2.

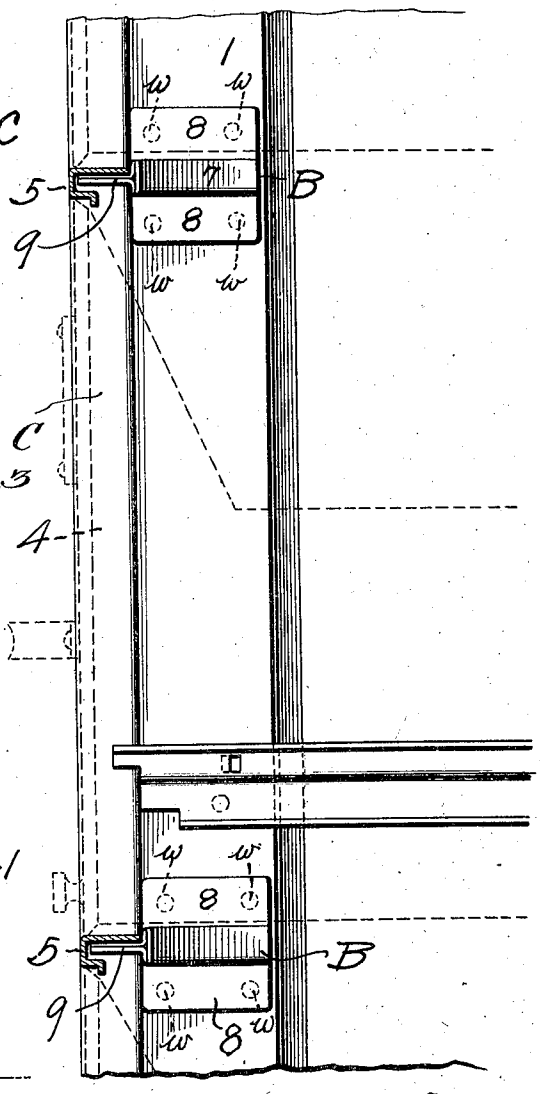

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Fig. 3.

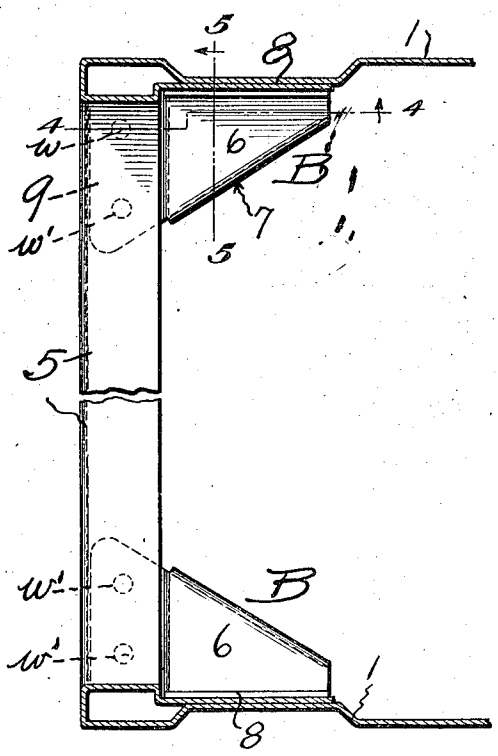


Fig. 5.

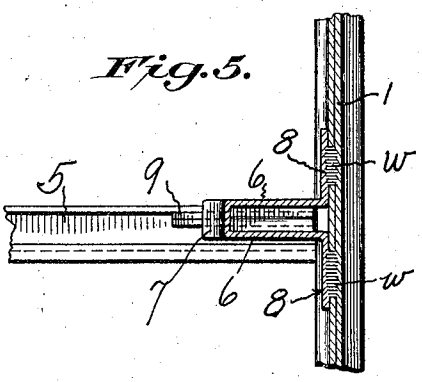


Fig. 6.

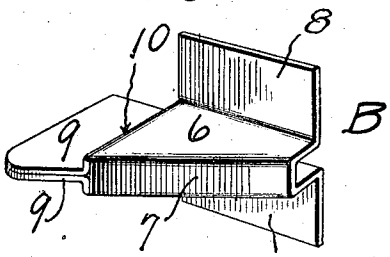


Fig. 4.

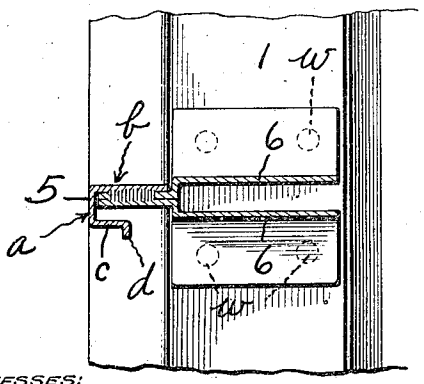
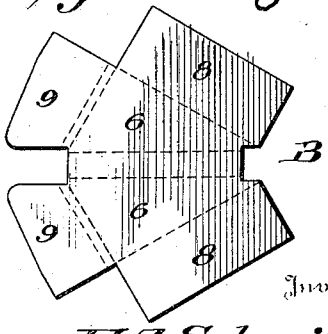


Fig. 7.



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UNITED STATES PATENT OFFICE.

FRED A. SCHMITZ, OF CLEVELAND, OHIO, ASSIGNOR TO THE GENERAL FIREPROOFING COMPANY, OF YOUNGSTOWN, OHIO, A CORPORATION OF OHIO.

BRACE FOR SUPPORTING CROSSBARS OF FILING CABINETS.

Application filed May 25, 1921, Serial No. 472,542. Renewed July 30, 1924.

To all whom it may concern:

Be it known that I, FRED A. SCHMITZ, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Braces for Supporting Crossbars of Filing Cabinets, of which the following is a specification.

This invention relates to an improvement in metal filing cabinets or cases, and has particular reference to a novel and practical construction for supporting and bracing the cross-bars or panel strips extending transversely of the cabinet between the drawers.

To that end the invention provides for connecting the cross-bar member to the side walls of the cabinet by novel bracing devices which will effectively hold the cross-bar in position and prevent displacement or disarrangement thereof, while at the same time materially adding to the strength, rigidity and stability of the entire front corner construction of the cabinet.

A further and more specific object of the invention is to provide a so-called knee-brace which may be made from a single strip of sheet material and bent with facility into a form which will give the desired stiffness and rigidity to thereby resist twisting or bending strains resulting from the usual shocks and jars due to the manipulation of the drawers.

Also to preserve a neatly finished front for the cabinet it is proposed to provide a concealed brace or corner-tie which will not in any way interfere with the manipulation of the sliding drawers.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts, hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings in which:—

Figure 1 is an elevation of a cabinet embodying the present improvements.

Figure 2 is an enlarged vertical sectional view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged horizontal sectional view taken on the line 3—3 of Figure 1.

Figure 4 is an enlarged detail sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a detail sectional view taken on the line 5—5 of Figure 3.

Figure 6 is a detail perspective view of a knee-brace.

Figure 7 is a plan view of the blank from which the knee-brace of Figure 6 is formed.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

Upon reference to Figure 1 it will be observed that the present improvements are adapted to be embodied in a cabinet C having the vertical side walls 1, top 2, base 3, and horizontal sliding drawers 4 having therebetween the transversely disposed panel strips or cross-bars 5.

The said cross-bars or panel strips serve to fill in the space between the drawer panels and also to perform the function of bracing the front of the cabinet by connecting the side walls 1—1 between the drawers, to thereby better distribute the strains and stresses due to the shifting in and out of the drawers which are often loaded with heavy storage matter. As will be noted from Fig. 4, for example the cross-bars are of channelled cross-section thereby providing the flat front wall *a* which is arranged at the exposed face of the cabinet and the upper and lower horizontal flanges *b*, and *c*, the latter being provided with the off-set edge or bead *d* forming in effect a rabbet for receiving the upper edge of the drawer and thereby constituting an effective dust guard and fire seal. Any desired member of cross-bars may be arranged transversely of the cabinet after the manner of the rungs of a ladder, and for the purpose of securely holding them in position and connecting their ends with the side walls 1 of the cabinet, it is necessary to provide adequate means to enable the bars to withstand the twisting and bending strains imposed there-

on, while at the same time arranging such means substantially within the horizontal plane of the cross-bar so as to avoid vertical projections which would interfere with the operation of the drawers.

Accordingly, the present invention aims to provide a novel knee-brace or corner-tie for the purpose above indicated, the same being designated generally as B and consisting, in its preferable embodiment, of a substantially U-shaped body portion including the substantially triangular side walls 6 connected by the transverse web 7, and having at their edges opposite the said web 7 suitable attaching flanges respectively for connecting with the sides of the cabinet and with the cross-bar. As may be readily seen from Figure 6, the flanges for connecting the knee-brace with the sides 1 of the cabinet are preferably formed by the oppositely disposed wings 8, while the flanges 9 for connecting with and supporting the cross-bar 5 are bent toward each other to provide in effect a single supporting member lying beneath and engaging with the underside of the flange *b* of the cross-bar 5. The bending of the flanges 9 as indicated provides an abutment shoulder 10 for engaging with the rear edge of the flange *b* of the bar 5, thereby to assist in holding the cross-bar in a rigid and stable position when the brace is secured in position.

The oppositely disposed flanges 8—8 are preferably welded as at *w* to the side 1 of the cabinet, and likewise the composite flange 9 is also attached to the cross-bar 5 by the spot welds *w'*. These welding points for the flanges 8 and 9 are preferably distributed in such a manner that the knee-brace is rigidly held in position to support the cross-bar 5, and with the aid of the abutment shoulder 10 effectively brace the entire corner of the cabinet. The substantially U-shaped formation of the triangular body portion of the brace is of particular importance since the liability of bending in one wall 6 is off-set by the opposite wall so that vertical bending strains are thereby more effectively distributed and carried into the side wall of the cabinet.

Figure 7 of the drawing shows a plan view of the blank from which the brace is formed, the dotted line indicating the line of the bends. These blanks may be stamped from sheet material with great rapidity and in such manner as to avoid waste, and therefore the design of the brace permits of its being readily made economically in commercial quantities.

Without further description it is thought that the manner in which the cross-bars are supported and held in position by the knee-brace will be readily apparent and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit of the invention or scope of the appended claims; and, it will also be understood that the knee-brace or its equivalent may be made in the form of a casting, or if desired, the front tie or cross bar may be formed with integral flanges at the ends, thus constituting an integral tie and knee-brace and thereby providing a unit which may be easily and readily handled.

I claim:

1. A cabinet construction including a metal side wall, a metal cross-bar, and a metal knee brace fitting the angle between the side wall and the cross-bar, and having flanges welded respectively to the side wall and cross-bar.

2. A cabinet construction including a metal side wall, a horizontal cross-bar, and a knee brace located in the angle between the cross-bar and the side wall and having a fastening connection with the cross-bar and also with the side wall.

3. In a cabinet construction, the combination with the side walls of the cabinet and a cross bar arranged between the same, of a brace for connecting the cross bar with the side walls of the cabinet and including a body consisting of spaced web members having a supporting engagement with the cross-bar and oppositely disposed attaching flanges formed from the said web members and being directly connected to the side walls of the cabinet.

4. In a cabinet construction, the combination with the walls of the cabinet and a metallic cross-bar, a brace consisting of a substantially U-shaped body for filling in the angle between the brace and the side of the cabinet, vertical and horizontal flanges formed from said body, and means for respectively attaching said flanges to a side wall of the cabinet and to the cross-bar.

5. In a cabinet construction, the combination with the vertical side walls of the cabinet and a horizontal cross bar arranged between the same, of a brace for connecting the cross bar with the side walls of the cabinet and including a body consisting of spaced web members having a supporting engagement with the cross bar and extended attaching flanges formed from the said web members and supported from the side walls of the cabinet.

6. A cabinet construction including a metal side wall, a metal cross-bar, and a knee brace fitting in the angle between the side bar and cross-bar and having oppositely disposed vertical flanges fastened to the side wall and also having a horizontal flange engaging with the cross-bar.

7. A cabinet construction including a metal side wall and a horizontal cross-bar, a brace located in the angle between the

cross-bar and the side wall and having a portion fastened to the horizontal cross-bar and also provided with offset flange a relatively extended bearing engagement with the side wall and attached thereto.

8. A cabinet construction including an upright metal side wall, a metal cross-bar, and a brace located in the angle between the cross-bar and the side wall, said brace lying substantially within the plane of the cross-bar and having the front portion thereof rigidly connected with said cross-bar and also having an angular offset portion adapted to be rigidly attached to the side wall.

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

FRED A. SCHMITZ.

Witnesses:

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CHAS. W. POPE.