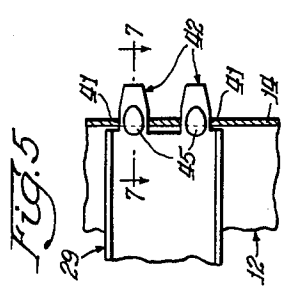
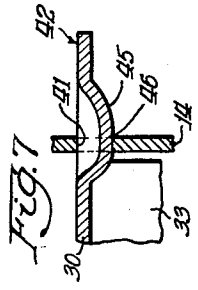
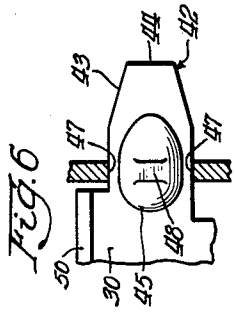
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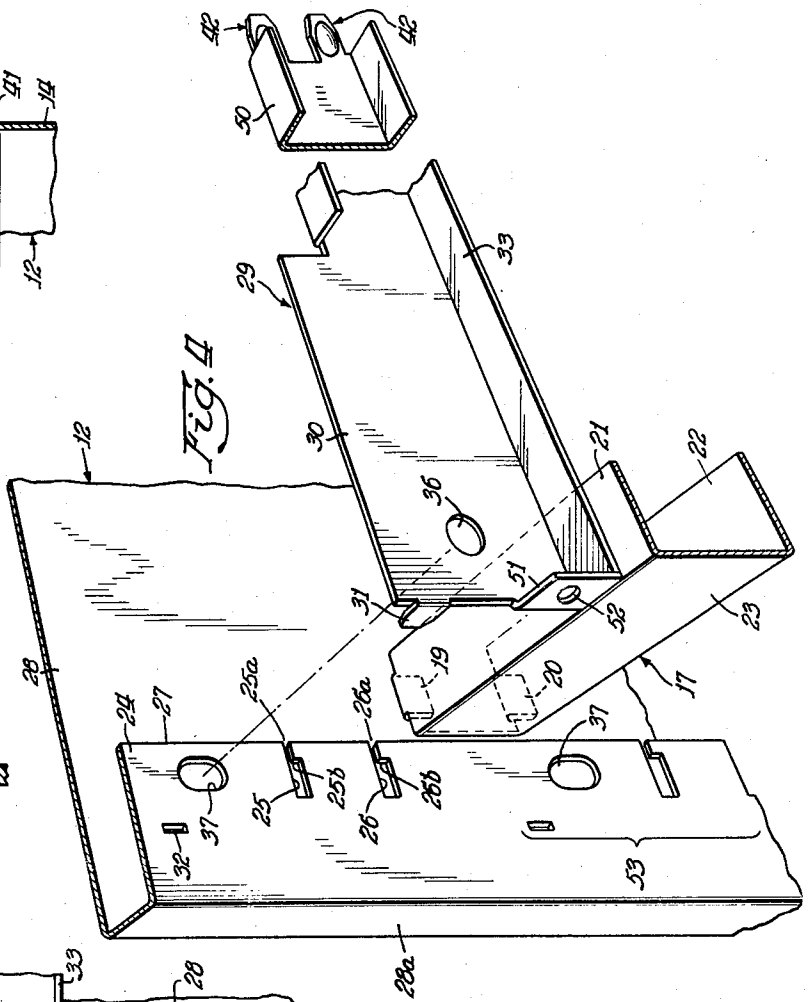
DEMOUNTABLE DRAWER SUPPORT ARRANGEMENTS

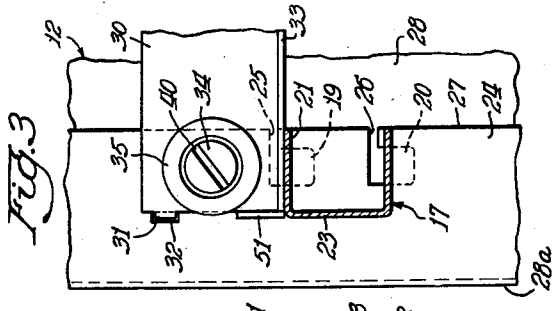
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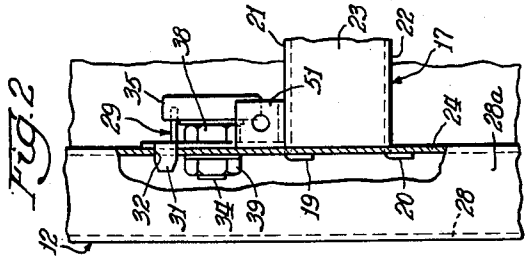


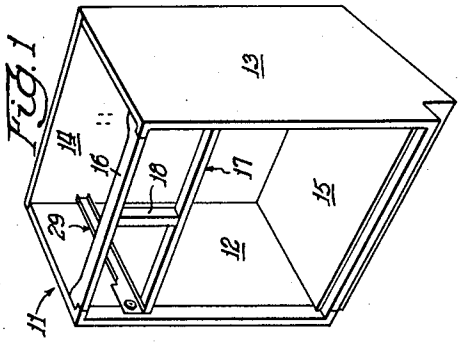












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DEMOUNTABLE DRAWER SUPPORT ARRANGEMENTS

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Application May 10, 1957, Serial No. 658,461

5 Claims. (Cl. 312—350)

This invention relates to demountable drawer support arrangements more particularly for sheet metal cabinet constructions and the like for use as laboratory equipment, for example, or for other scientific establishments.

Among other objects, the present invention aims to provide drawer support arrangements which contribute to ready assembly and interchangeability of parts whereby manufacture of a cabinet is simplified and expedited with accompanying minimization of cost of production.

An important aspect of the present invention is that it affords interfitting assembly means that may be availed of without the use of special tools, contemplating as it does the employment of tabs or tongues that are enterable in notches or slots selectively and predeterminedly arranged to obviate the necessity for measurements and calculations by the workmen doing the assembly. In another aspect, the location of one part with respect to a second part is not only selectively predetermined but also is fixed in the final assembly by the securement of a third part. The preferred construction provides for rearrangement of the cabinet parts before or after installation of the cabinets.

Other objects and advantages will be apparent from the following detailed description, taken together with the accompanying drawing showing an illustrative embodiment of the invention, and in which drawing—

Figure 1 is a perspective view of main parts of a cabinet or the like embodying the present invention;

Figure 2 is an enlarged fragmentary front view of parts shown in Fig. 1;

Figure 3 is a fragmentary side view of the same parts;

Figure 4 is an enlarged so-called exploded perspective view of parts shown in Figs. 1, 2 and 3;

Figure 5 is a detail view of parts shown at the right-hand end of Fig. 4 in assembly with the cabinet rear wall;

Figure 6 is a further enlarged detail view of parts shown in Fig. 5; and

Figure 7 is a fragmentary plan section taken of parts shown in Fig. 6 on the scale thereof, and being also a similar plan section enlarged taken on the line 7—7 of Fig. 5.

Referring in detail to the illustrative construction shown in the drawings, the cabinet 11 may have the main parts such as the side walls 12 and 13, rear wall 14 and bottom wall 15 as well as top cross member 16 and intermediate cross member 17. Between the cross members 16 and 17 there is shown a divisional upright 18. The space below the cross member 17 may be utilized for a cabinet compartment having door closures, for example, while the space above the cross member 17, in this instance is adapted for two drawers, side by side, separated by the division member 18. The corner joint construction between the cross member 16 and one of the side walls, such as the side wall 12, and between the bottom wall 15 and the side wall 12 is described and claimed in my co-pending application Serial No. 658,462, filed May 10, 1957, entitled "Joint Construction for Cabinets and the Like."

In accordance with the present invention, the intermediate cross rail or member 17 is supported on the side walls 12 and 13, as here specifically shown with respect to wall 12, by depending lugs 19 and 20 on the upper wall 21 and lower wall 22 respectively of the channel of the cross rail 17, the channel having a vertical connecting wall 23 that provides a front surface for the cross rail. The side wall 12 has a vertically extending channel formation along its front end that includes an inwardly spaced wall 24. To interengage with the lugs 19 and 20 the channel wall 24 of the side wall 12 is slotted or notched as at 25 and 26 to receive the lugs. For easy entrance of the lugs into the slots respectively the latter have restricted mouths 25*a* and 26*a* opening into the free rear edge 27 of the channel wall 24 so that the cross rail 17 may have its lugs 19 and 20 slid into the mouths 25*a* and 26*a* respectively, the cross rail being then pulled forward to locate the lugs in the slots 25 and 26, upstanding shoulders 25*b* and 26*b* in each slot respectively inhibiting retractive movement of the cross rail out of the slot except if it be lifted against the force of gravity above the shoulder. The channel wall 24 is part of inturned channel formation that includes the panel portion 28 of the side wall 12 and a front channel wall 28*a*.

Further in accordance with the present invention, not only is the cross rail 17 held in the slots 25 and 26 by the influence of gravity but it is desirably locked therein by the expedients next described and which include the drawer track or guide 29 that extends from front to rear of the cabinet adjacent and parallel with the panel portion 28 of the side wall 12.

In this embodiment, the drawer guide 29 on its vertical wall 30 has a laterally outwardly turned tang 31 that is snugly received in a slot 32 in the channel wall 24 of the side member 12 when the lower flange 33 of the drawer guide 29 rests on the upper wall 21 of the cross rail 17, the drawer guide thus being supported jointly by the cross rail and by the wall 24, while at the same time when the drawer guide is thus positioned the cross rail is held from being lifted out of the slots 25 and 26. For added securement, the lugs 19 and 20 and the reception slots 25 and 26 are horizontally disposed while the tang 31 and slot 32 are vertically disposed. The distance between the slot 32 and slot 25, for example, is suitably predetermined to effect the assembly just described.

To secure the drawer guide 29 from lateral movement on the cross rail 17 in a direction to pull the tang 31 out of the slot 32, the bearing screw 34 for the roller 35 of nylon or the like is passed through registering holes 36 and 37 in the guide vertical wall 30 and channel wall 24, these holes registering when the guide 29 is in the operative hold-down position above explained. The bearing screw stud 34 is shown passing through a nut 38 between the roller 35 and the guide wall 30 and also has screwed thereonto another nut 39 on its end which passes through the hole 37. The screw 34 advantageously has a kerf 40 therein for locating a screw driver by which the screw may be tightened in the nuts 38 and 39 to lock the roller mounting arrangement just described. Lock washers may be employed if desired. One of the holes such as the hole 37 may be slightly vertically elongated as shown to provide some tolerance for easy assembly of the parts as just described.

At its rear end the drawer guide 29 is supported on the rear wall 14 of the cabinet 11 by a tongue and slot arrangement that includes a pair of slots 41 vertically elongated and spaced apart to snugly receive the tongues 42, respectively, that project rearwardly of the guide 29, the invention including expedients by which the tongue 42 may be readily entered into the slot 41 with ease and rapidity of assembly operation while at the same time effecting a snug or even tight fit therein after assembly.

To accomplish the purpose last mentioned, the tongues

42 are desirably tapered at their outer edge as at 43 so that the end of the tongue has a vertical height in the plane of the tongue as at 44 substantially less than the vertical height of the slot 41 in said plane, thus making it easy to enter the tongue in the slot. Intermediately of their lengths the tongues 42 have a bulge 45 therein in a plane normal to the plane of the tongue so that then, as the tongue is pushed home into the slot, the lateral edge of the slot rides onto the bulge 45 as at 46 (Fig. 7) thus wedging the tongue in the slot against relative lateral movement while at the same time the tongue makes a snug and even tight fit as at 47 (Fig. 6) vertically with the slot to guard against relative vertical movement therein. The bulge 45 is desirably flattened somewhat at its apex 48 (Fig. 6) as to avoid any camming action tending to force the tongue out of the slot when the tongues are pushed home.

As here shown, the drawer guide 29 has for at least a portion of its length an upper flange 50 that cooperates with the lower flange 33 to provide a track for a roller, similar to the roller 35, on the drawer itself, and at its forward end the drawer guide may have a tab 51 perforated as at 52 to mount a rubber button or the like that will act as a stop for the drawer front when the drawer (not shown) is pushed inwardly.

In order to provide for interchangeability of drawer sizes in their vertical dimensions, for example, the wall 24 of the end member 12 may have pre-arranged sets of slots and perforations therein, another such set being shown at 53 having arrangements identical to the arrangements provided by the slots 25, 26, 32 and hole 37 already described and for the same purposes.

It will of course be understood that the upright division member 18 may have a similar arrangement of drawer supporting means therein and that the rear wall of the cabinet 14 has similar multiple sets of slots 41 therein correspondingly arranged for a drawer of a given vertical dimension or for a different vertical dimension, selectively.

The invention is not intended to be limited to all details shown for purposes of exemplification thereof and it may not be essential, in all aspects of the invention, to use all features thereof conjointly, since various combinations and subcombinations may at times be advantageously employed. Such changes may be made, including modifications or additions, as are covered by the appended claims without departing from the invention.

What is here claimed is:

1. In drawer support arrangements for sheet metal cabinets or the like having a vertical member and a rear wall, a cross member, interengaging formations on the vertical member and cross member for supporting the cross member on the vertical member, said formations including lugs on the cross member and shouldered slots in the vertical member, said lugs being arranged to abut shoulders in the slots respectively when located therein, a drawer guide disposed parallel to the vertical member and adapted to rest on the cross member, a tang on the guide, a slot in the vertical member receiving the tang, registering perforations in the vertical member and drawer guide, means including a roller mounting screw passed through said vertical member and said drawer guide, and nuts on the screw on opposite sides of the vertical wall respectively clamping the vertical member and drawer guide therebetween.

2. In drawer support arrangements for sheet metal cabinets having a side wall and a rear wall, the side wall having an inwardly turned channel formation providing a short inner wall at its front end, that improvement comprising, a horizontally extending slot in said inner wall, said slot having a restricted mouth opening into the rear edge of said inner wall and providing an upstanding shoulder in the slot, a cross-rail having a downturned lug received initially in said mouth and slid forwardly therein and dropped to abut said shoulder, a front to rear extending drawer guide resting at its forward end on said cross-rail when the said lug abuts said shoulder, and interengaging means between the said inner wall and said drawer guide fixing the position of the drawer guide resting on said cross-rail whereby the drawer guide holds the cross-rail in position with said lug in said slot and abutting said shoulder.

3. The structure of claim 2 wherein there are a plurality of said slots vertically spaced apart in said inner wall and there are a plurality of said turned down lugs on the cross-rail registering therewith.

4. The structure of claim 2 wherein the interengaging means includes a vertically extending slot in the inner wall and a mating tang on the drawer guide snugly received in said vertically extending slot, said horizontally extending slot and said vertically extending slot being spaced apart a predetermined distance to hold the drawer guide down on the cross-rail.

5. The structure of claim 2 wherein the drawer guide carries a tongue on its rear end wedge shaped in two transverse directions and the rear wall is slotted to receive said tongue by a dual wedging action.

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