

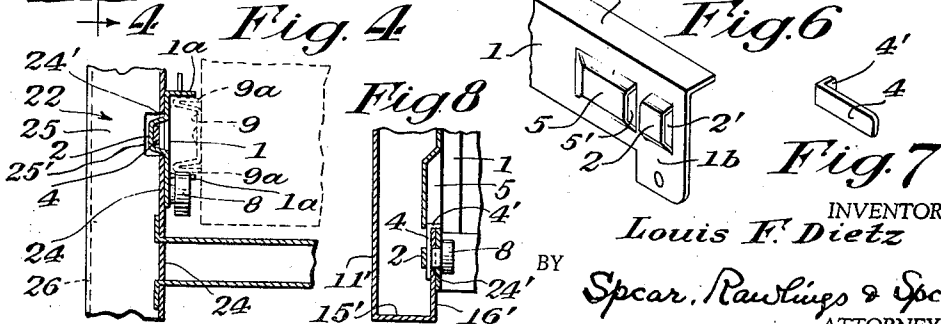
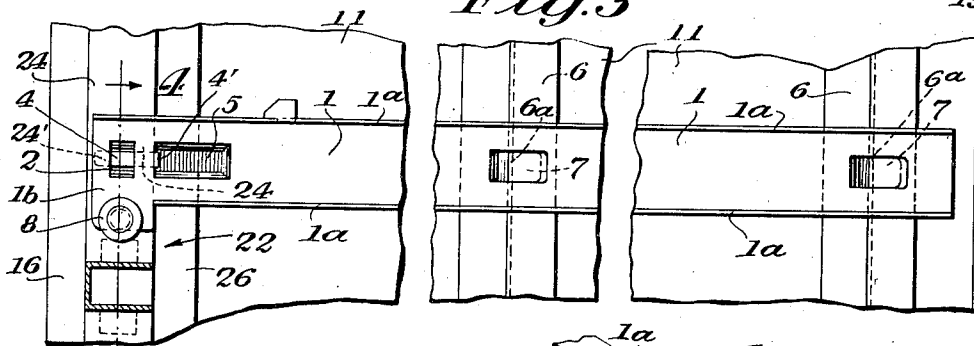
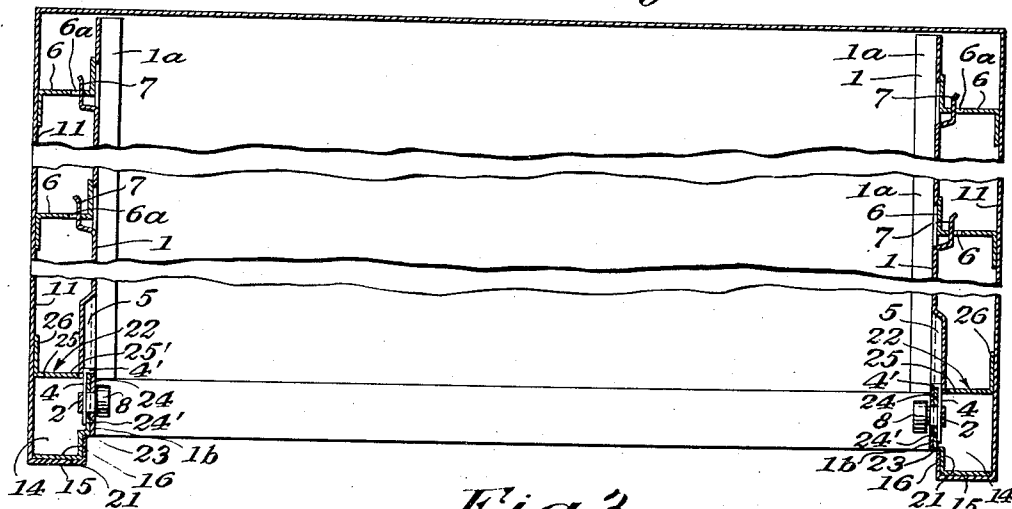
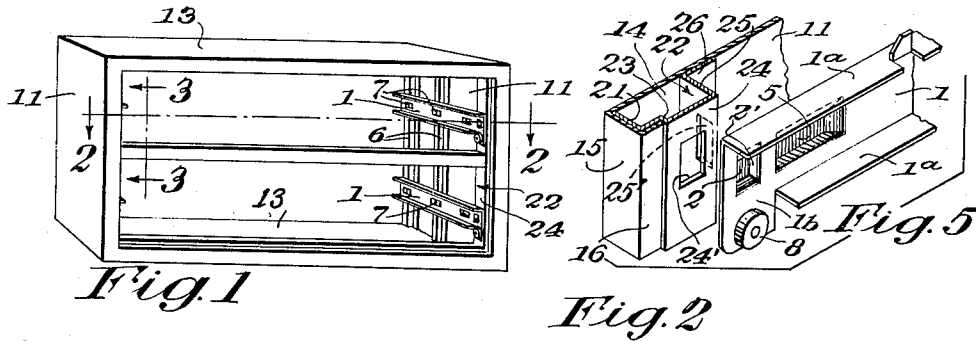
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DRAWER SUSPENSION MEANS

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DRAWER SUSPENSION MEANS

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This invention relates to improvements in cases, cabinets, desks, or like structures in which sliding drawers are suspended from the walls of the structure and particularly to the drawer suspending means.

In drawered constructions of the type with which my invention is concerned, the so-called case channels, which are the means for suspending the drawer within its opening in the cabinet, are mounted on the cabinet walls, and serve as slideways for slide members projecting from the sides of the drawers.

The case channels are usually attached to the cabinet walls by screws, but these are apt to work loose where there is vibration present, as in the case of vessels, trains, or like moving structures.

Accordingly, it is the primary object of my invention to eliminate the use of these screws while at the same time providing a very rigid interlock of cabinet wall and case channel which is of such nature as both to expedite the original attachment of the case channel to the cabinet wall and to permit the case channels to be readily removed and replaced when desired.

I accomplish this object by providing the outer face of the case channel near its forward end with a laterally offset tubular locking projection which is adapted to be inserted within a closely-conforming locking aperture in the related wall of the cabinet (or in a dust plate fastened to said wall). This locking projection also constitutes a keyway for a drive key by means of which the case channel and cabinet wall are held in rigidly interlocked but quick-detachable assembly.

Behind, and alined with said locking projection, each case channel is preferably provided with a second offset projection or keyway through which the drive key is introduced from the rear in the operation of interlocking the case channel to its related cabinet wall. This second projection is preferably closed at its rear end. Its forward end is open and registers with the adjacent open end of said locking projection and with a small slot of the approximate size of the drive key cut in the dust plate (if a dust plate is used).

When the key is fully seated, it lies substantially entirely within the locking projection within its inner face bearing against the adjacent face of the cabinet wall (or the dust plate) and with its head lodged within said second-named projection at substantially the forward open end thereof.

If desired, I may further supplement the in-

terlock of the case channel and its related cabinet wall by providing the outer face of each case channel, in rear of said projections, with one or more spaced locking tongues which are adapted to be engaged within correspondingly located apertures formed in one or more spaced reinforcing members disposed between each case channel and its related cabinet wall.

For the purposes of this application, I have illustrated my invention as applied to a roller type of case channel. It will be understood, however, that the same method of attaching the case channel to the cabinet wall may be utilized in so-called progressive type, extension type, and plain channel type of drawer suspension members, in which event, of course, the rollers shown herein would be omitted.

Throughout the specification and drawing like reference numerals are employed to indicate corresponding parts. In the drawing:

Fig. 1 is a perspective view of a two-drawer cabinet equipped with my novel suspension means, the drawers being removed in order to permit clear illustration of the drawer-suspension means and the cabinet being of the type wherein dust plates are used in its side wall structure.

Figs. 2 and 3 are sections on the lines 2-2 and 3-3, respectively, of Fig. 1.

Fig. 4 is a section on the line 4-4, of Fig. 3.

Fig. 5 is a fragmentary perspective view, as seen from the inside of the cabinet, showing the forward end of one of the case channels and its related cabinet wall, the parts being shown as separated for purposes of clearness.

Fig. 6 is a fragmentary perspective view of the case channel shown in Fig. 5 but showing the opposite or outer face thereof.

Fig. 7 is a perspective view of the locking key, and

Fig. 8 is a fragmentary vertical section through a cabinet wall not equipped with a dust plate, showing the application of my novel drawer suspension means thereto.

In the drawing my improved drawer suspension means is shown embodied in a cabinet, generally indicated by the reference numeral 10, and comprising spaced side walls 11 connected by top and bottom walls 13 in any suitable manner.

In the type of cabinet illustrated in Figs. 1 to 4 inclusive, the forward vertical edges of the side walls 11 are shaped to create vertically extending pockets 14 which are formed by the wall flanges 15 and 16. In each pocket 14 is located the forward flanged end 21 of a dust plate 22

similar to that disclosed in the patent to Jones No. 1,880,392. The inner face 24 of this plate is two plane, due to its being formed with a transverse shoulder 23, which shoulder is abutted by the rearwardly extending edge of the inside wall flange 16. The rearward portion of the plate 22 is formed with right angle flanges 25 and 26, the flange 26 lying against the inner face of the side wall 11, and the plate 22 is welded or otherwise joined to the side wall 11 and wall flanges 15 and 16.

Where the cabinet is equipped with these dust plates 22, I utilize them as a mounting for the forward end of the case channels 1, the case channels being attached thereto according to my present invention by quick-detachable means which however remain firm and rigid regardless of any vibration to which the cabinet may be subjected.

To effect this improved mount of the case channels, I provide a slot or other opening 24' through the inner wall 24. The slot 24' is sized to snugly receive a laterally offset tubular locking projection 2 adjacent the forward end of the outer face of the case channel 1. The open ends 2' of the locking projection 2 admit passage of a drive key 4 through said projection, which key when fully seated bears firmly against the inner face 24 of the plate 22 and holds the case channel tightly against said plate.

In order that the key 4 may be readily inserted through the keyway or locking projection 2, I provide a second projection or keyway 5 disposed in line with but rearwardly of and slightly spaced from the projection 2. The rear end of the keyway 5 is preferably closed. Its forward end is open as at 5' in order to permit the passage of the key 4 through the keyway 5 into the projection 2.

In order to accommodate the key, the flange 25 of the dust plate is provided with a small vertical slot 25' (Fig. 5) of the approximate size of the key. This slot registers with the open end 5' of the keyway 5 when the case channel 1 is assembled to its related cabinet wall 11 (see Fig. 2). Although this slot 25' is shown in Fig. 5 as somewhat wider than the key, such showing is merely for purposes of clearness of illustration. In practice, the slot is made as small as practicable in order to reduce to the minimum the possibility of vermin entering at this point after the parts have been assembled.

When the key is fully inserted its head 4' contacts the adjacent edge of the case channel wall as shown in Fig. 3 to limit the insertion of the key and to ensure its ready removal from the projection 2.

While I have shown my key interlock of cabinet wall and case channel as provided only at the front end of the cabinet, it obviously may be duplicated at any other points longitudinally of the case channel. Or, if desired, I may provide supplemental fastening means. For example, I may weld or otherwise rigidly attach to the cabinet walls 11 at selected points one or more spaced vertical reinforcing members 6 which as shown in Fig. 2 may consist of reversely flanged angle irons. These reinforcing members 6 are apertured as at 6^a and through these apertures pass hooks or tongues 7 extending from, and as shown, integral with the outer faces of the case channels in rear of the projections 2 and 5.

In assembling, the case channel 1 is anchored to the side wall 11 of the cabinet by engaging the

tongues 7 in the slots 6^a of the vertical reinforcing members 6 and engaging the projection 2 in the closely conforming opening 24' of the wall 24 of the dust plate 22. This brings the open end 5' of the keyway 5 into registry with the slot 25' in the flange 25 of the dust plate 22 so that when the key 4 is inserted through the keyway 5 it will pass through the slots 5' and 25' and into the keyway 2 until its head 4' stops against the wall 25, thus rigidly but detachably locking the parts in position.

To disassemble, it is simply necessary to force the key backwardly into the keyway 5 until it is wholly dislodged from the keyway 2, and then separate the parts by withdrawing the keyway 2 from the locking aperture 24'.

The case channels 1 preferably have inturned flanges 1^a and, in the roller type of drawer bearing shown, the forward end of the case channel is extended downwardly as at 1^b and carries a roller 8. The flanges 1^a provide a trackway for the flanges 9^a of a channeled drawer slide 9 (see Fig. 4) the roller 8 traveling over the lower flange of said drawer slide. Where the rollers are omitted, the contacting surfaces 1^a and 9^a may be slightly lubricated to reduce friction.

With the form of cabinet shown in Fig. 8 no dust plate is embodied in the cabinet wall structure. Instead, the cabinet wall 11' is bent upon itself at its forward end as at 15' and again bent as at 16' to furnish a hollow space equivalent to the pocket 14 in Figs. 1 to 4 inclusive.

The inner portion 16' of said wall is provided with a closely-conforming locking aperture similar to the locking aperture 24' in Figs. 1 to 4 inclusive, within which aperture the locking projection 2 of the case channel 1 is received. The case channel is identical with the case channel shown in Figs. 1 to 4 inclusive and is locked to the cabinet wall 11' in the same manner and by the same type of drive key 4.

Various other modifications in construction and arrangement may obviously be resorted to within the spirit and scope of my invention as defined by the appended claims.

What I therefore claim and desire to secure by Letters Patent is:

1. Drawer suspension means comprising a cabinet wall having a locking aperture, a case channel, means for connecting the forward end of the case channel to the cabinet wall comprising a tubular locking projection extending from said case channel for insertion through said aperture, key guiding means associated with said locking projection, a drive key anchored in said guiding means and extending through said locking projection and frictionally engaging said cabinet wall, and means for connecting said channel to said wall at other points.

2. The drawer suspension means of claim 1, the cabinet wall having a pocket-forming dust plate fastened thereto, and the locking aperture being located in a wall of said dust plate and being spaced by said dust plate from said cabinet wall.

3. The drawer suspension means of claim 1, the key guiding means being a second projection on the outer face of the case channel in rear of and aligned with said locking projection and constituting a keyway through which said key is entered and by which it is guided into said locking projection when the parts are assembled.

4. The drawer suspension means of claim 1, the drive key being headed and when fully seated extending through and beyond the ends of said

locking projection and frictionally bearing against said cabinet wall.

5 5. In combination, a cabinet having a walled drawer receiving opening, means for suspending
 10 said drawer from the side walls of said opening, said means including a case channel and a plurality of members extending inwardly from the side walls of said drawer opening, each presenting a surface at right angles to said side wall and a
 15 surface parallel to said wall, the right angled surface of one of said members being slotted and said case channel carrying a member adapted to enter into said slot to secure said case channel to the said side wall, the parallel surface of
 20 another of said members being slotted, a projection on the outer face of said channel member extending into said slot, and means including key guiding means on said outer face and a key extending from said guiding means into said
 25 projection for rigidly locking said projection in said slot.

6. Drawer suspension means comprising a cabinet wall having spaced inner and outer portions and having a locking aperture adjacent the
 25 forward end of said inner wall portion, at least one vertically disposed reinforcing member fastened to said outer wall portion in rear of said locking aperture and itself having a locking aperture, a case channel having on its outer face
 30 a laterally offset tubular locking projection for entrance into said first-named locking aperture and having in rear of said projection a locking tongue for entrance into said second-named locking aperture, key guiding means associated with said locking
 35 projection, and a drive key extending from said guiding means through said locking projection and frictionally engaging the inner portion of said cabinet wall.

7. The combination of claim 6 said guiding means being positioned between said locking projection and said locking tongue and comprising a second offset projection open at its forward

end and alined with said locking projection and constituting a keyway by means of which the drive key is guided into said locking projection.

8. Drawer suspension means comprising a cabinet wall having a locking aperture, a case channel, means for mounting said channel on
 5 said wall including an open-ended projection extending from said case channel for insertion through said aperture, a second projection extending from said case channel and constituting
 10 a keyway, and a drive key passing through said keyway and the open ends of said locking projection to frictionally engage the cabinet wall on both sides of said locking projection to lock the case channel to the cabinet wall.

9. Drawer suspension means comprising a cabinet wall having a locking aperture, a case channel, an open-ended projection extending from said case channel for insertion through said
 20 aperture, a keyway formed on said case channel communicating with said locking projection, and a drive key passing through said keyway and said locking projection to frictionally engage said cabinet walls on both sides of said locking projection to lock the case channel to the cabinet wall.

10. The drawer suspension means of claim 9, said key having a portion adapted to be anchored in said keyway to limit movement of the key longitudinally of said locking projection and adjacent cabinet wall.

11. Drawer suspension means comprising a wall member, a case channel member, said members having interlocking portions on their adjacent surfaces, a key for locking said portions together and a keyway formed on one of said
 35 members for guiding said key into said interlocking portions.

12. The drawer suspension means of claim 11, and interengaging means on said key and keyway whereby said key is held in locking position.

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