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SECTIONAL CABINET STRUCTURE

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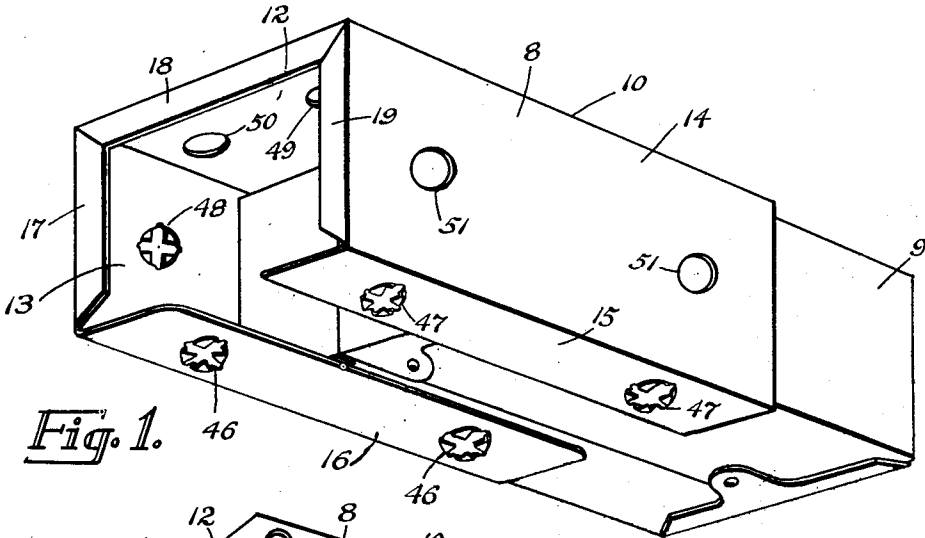


Fig. 1.

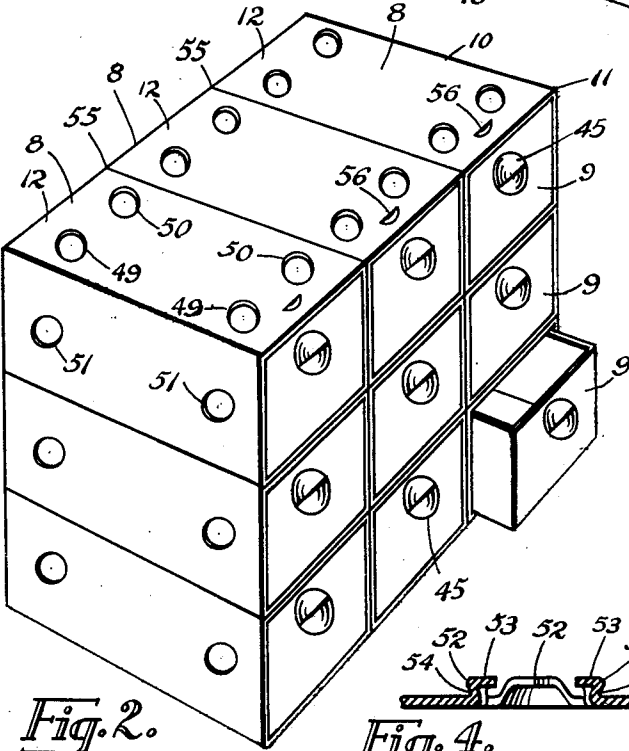


Fig. 2.

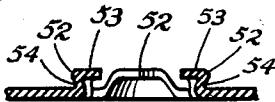


Fig. 4.

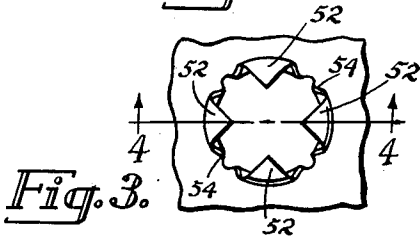


Fig. 3.

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SECTIONAL CABINET STRUCTURE

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8 Claims. (Cl. 312-107)

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This invention relates to sectional filing cabinets or storage cabinets, particularly to individual sections which may be arranged and interlocked in side-by-side and in stacked relationship.

One of the objects of this invention is the facility with which a multiplicity of shells may be arranged in side-by-side relationship or in stacked relationship, or both, to form a rigid, sturdy sectional storage or filing cabinet.

Another object of the invention is the accomplishment of the foregoing objective at low manufacturing cost, and with a saving of labor and of storage and transportation space.

Another object is the accomplishment of the foregoing, resulting in a sturdy, rigid sectional storage or filing cabinet with substantially flush top, bottom, sides, and back, with consequent saving in storage and shipping space.

The foregoing and other objects are obtained by the means described herein and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view, as seen from the bottom and rear of a complete improved storage section composed of a shell and a drawer showing the drawer partially withdrawn.

Fig. 2 is a perspective view, on a reduced scale, of a storage cabinet composed of a multiplicity of sections shown in Fig. 1.

Fig. 3 is a fragmentary section, on an enlarged scale, showing a plan view of a snap fastener.

Fig. 4 is a cross-sectional view taken on line 4-4 of Fig. 3.

It has been common practice heretofore to construct interlocking sections with protuberances of various types to form interlocking mechanisms, said protuberances being subject to distortion caused by dropping, throwing, and other rough and careless handling, said protuberances also occupying additional and unnecessary space between adjacent sections and at the sides of end sections of assembled units, and also requiring a substantial amount of time and dexterity in assembling the units into sectional cabinets.

The present section is so constructed as to obviate all the disadvantages mentioned, requiring merely the pressing together of the shells to engage the sockets with the snap fasteners, thus providing a sturdy and rigid sectional storage or filing cabinet with substantially flush surfaces on all sides.

Referring to the drawing a multiplicity of sections 10 are detachably connected with one another in side-by-side and in stacked relation-

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ship to form a sectional storage or filing cabinet 11, Fig. 2. Section 10 is composed of two parts, the shell 8 and the drawer 9, both preferably made of sheet metal, plastic, or other suitable material. Each drawer 9 is shown provided with a finger pull 45 at the front thereof.

Shell 8 is rectangular in form, consisting of top 12, sides 13 and 14, inturned flanges at the bottom of side walls 13 and 14 forming runways 15 and 16 for the drawer, and stops 17, 18, and 19, all formed from a single sheet of material. It will be noted that runways 15 and 16 are coplanar and extend towards but terminate short of the longitudinal center of the bottom forming a space therebetween to provide flexibility in aligning sections when superimposing them in stacked relationship.

The runways or flanges 15 and 16 will be seen to constitute the bottom portion or bottom wall of the shell, notwithstanding the fact that they are separated by a space between them. Each shell 8 is provided at the front of its top wall 12 with a stop 56 which normally precludes full withdrawal of its drawer from the shell, said stop being punched in the blank which forms shell 8.

In order to form a rigid and sturdy sectional cabinet, it is necessary to provide an interlocking mechanism capable of firmly maintaining the detachable sections in side-by-side or stacked relationship, or both. In the present invention this is accomplished by a series of interlocking mechanisms, in the form of a device commonly known as a snap fastener 46, 47 and 48, and cooperating sockets 49, 50 and 51, said fasteners and sockets being integrally formed in shell 8.

An enlarged plan view of the snap fastener is shown in Fig. 3, with a cross-sectional view shown in Fig. 4. The snap fastener is composed of a series of resilient ears or lugs 52, bent upwardly, outwardly, and then inwardly, forming a protuberance having a substantially flat-topped head and an annular seat or neck portion 54 to receive a socket. The top faces 53 of said ears are substantially parallel with the face of the shell and slightly higher in elevation than the thickness of the material of which it is a part, thus producing a fastener substantially flush with the various surfaces of the shell 8. The ears 52 are formed from triangular projections initially produced in the sheet which forms the shell by punching material therefrom in the form of an X.

Referring to Figs. 3 and 4, the outer diameter of the head of each fastener 46, 47, and 48 is slightly greater than the diameter of the sockets or apertures 49, 50 and 51 in Fig. 2, while the

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diameter at the seat or neck 54 of each fastener is substantially the same as the diameter of the sockets, thus forming a tight and secure connection when a socket is pressed over a fastener.

The sockets 49, 50 and 51 consist simply of circular apertures punched from the material forming the shell. These sockets might conceivably be of other shapes, for example, square, provided that the distance across the aperture approximates the distance across opposed seats 54.

It will be noted that fasteners 47 on runner 15 are placed in direct alignment with sockets 49 on top 12, the fasteners on runner 16 are in direct alignment with sockets 50 on top 12, and fasteners 48 in side 13 are in direct alignment with sockets 51 in side 14, so that when one section is disposed side by side with another section for the purpose of forming a sectional cabinet, it is necessary only to press fasteners 48 on side 13 of one shell through sockets 51 on side 14 of another section, or if a stacked relationship is desired, it is necessary only to press fasteners 46 and 47 on runners 16 and 15 respectively, of one section into sockets 49 and 50 on top 12 of another section. A multiplicity of sections may be thus disposed in side by side and stacked relationship to form a sturdy and rigid sectional cabinet with a minimum of effort and skill, there being no pins, parts or other accoutrement requiring dexterity to assemble or to become lost.

To detach sections, it is necessary only to pull them apart. When sections are disposed in side by side relationship there is no unnecessary space between adjacent sides 13 and 14, thus forming a closed seam as shown in 55 of Fig. 2. This is an advantage over other cabinets having projections of various kinds to form interlocking devices, because valuable shipping and storage space is thus saved.

While the type of invention as described herein is the preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow.

The construction described favors the use of light gauge sheet metal with a minimum of expense and complex fabricating operations, while at the same time resulting in a highly serviceable product which possesses the necessary strength and durability required of devices of this general character. Assembly of the shells to produce multiple units of any size or capacity is effected with facility and dispatch, and due to the absence of projecting flanges or extensions on the shells, no difficulty in assembly is encountered by reason of crushing or injury to such parts occurring in handling or shipment. Moreover, a series of shells once assembled cannot shift or become displaced in service, to produce a structure which may be mechanically unstable, and unsightly in appearance.

Various modifications and changes in the structural details of the device may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What is claimed is:

1. An elongated shell of sheet metal for accommodating a sliding drawer therein, said shell having top and side walls and a bottom comprising horizontal flanges extending inwardly toward the longitudinal center of the bottom but terminating short thereof to provide a space therebetween, one side wall having an aperture adjacent each end thereof and located about midway between the top and bottom edges thereof, the opposite

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side walls having a resilient protuberance projecting outwardly therefrom and adjacent each end thereof, said side wall protuberances being in alignment with the apertures in the first mentioned side wall, the top wall having an aperture adjacent each corner thereof and the flanges at the bottom having resilient protuberances projecting downwardly therefrom and in vertical alignment with the apertures in the top wall of said shell, the apertures in said top wall being adapted to receive the protuberances at the bottom of a shell when placed on top of the same, the apertures in one of said side walls being disposed to receive the protuberances of a shell mounted against said side wall and the protuberances on the opposite side wall being disposed to extend through the apertures in the side wall of a shell mounted against the same, whereby a plurality of vertical stacks of said drawer shells may be interlocked one to another and the shells in adjacent stacks may be interlocked with the abutting sides of shells in said plurality of stacks.

2. A sheet metal shell for accommodating a sliding drawer therein, said shell having top and side walls and a bottom comprising horizontal flanges extending inwardly toward the longitudinal center of the bottom, one side wall having an aperture adjacent each end thereof and located between the top and bottom edges thereof, the opposite side wall having a resilient protuberance projecting outwardly therefrom and adjacent each end thereof, said side wall protuberances being in alignment with the apertures in the first mentioned side wall, the top wall having an aperture adjacent each corner thereof and the flanges at the bottom having resilient protuberances projecting downwardly therefrom and in vertical alignment with the apertures in the top wall of said shell, the apertures in said top wall being adapted to receive the protuberances at the bottom of a shell when placed on top of the same, the apertures in one of said side walls being disposed to receive the protuberances of a shell mounted against said side wall and the protuberances on the opposite side wall being disposed to extend through the apertures in the side wall of a shell mounted against the same, whereby a plurality of vertical stacks of said drawer shells may be interlocked one to another and the shells in adjacent stacks may be interlocked with the abutting sides of shells in said plurality of stacks.

3. A drawer shell according to claim 1 characterized by the fact that a drawer stop is provided at the rear of said shell.

4. A drawer shell according to claim 1 characterized by the fact that the rear edges of said top and side walls are provided with inwardly projecting flanges to form a drawer stop.

5. A drawer shell according to claim 2 characterized by the fact that a drawer stop is provided at the rear of said shell.

6. A drawer shell according to claim 2 characterized by the fact that rear edges of said top and side walls are provided with inwardly projecting flanges to form a drawer stop.

7. A drawer shell according to claim 1 characterized by the fact that apertures in said one side wall and the top wall are circular, and that each of said protuberances has a plurality of outwardly flared lugs arranged in a circle forming a substantially flat-topped head whose diameter is larger than the diameters of said circular apertures and a neck portion having a diameter smaller than the diameters of said circular apertures, whereby when a shell is placed with said protuberances

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in alignment with the corresponding apertures in an abutting shell and pressure is applied to the shells at said apertures and protuberances the protuberances snap through said apertures and engage the shell wall surrounding said apertures thereby interlocking said abutting walls. 5

8. A drawer shell according to claim 2 characterized by the fact that apertures in said one side wall and the top wall are circular, and that each of said protuberances has a plurality of outwardly flared lugs arranged in a circle forming a substantially flat-topped head whose diameter is larger than the diameters of said circular apertures and a neck portion having a diameter smaller than the diameters of said circular apertures, whereby, when a shell is placed with said protuberances in alignment with the corresponding apertures in an abutting shell and pressure is applied to the shells at said apertures and pro- 10

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tuberances the protuberances snap through said apertures and engage the shell wall surrounding said apertures thereby interlocking said abutting walls.

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