United States Patent [19]

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[11] **3,710,974**

[45] **Jan. 16, 1973**

[54] **DRAWER DIVIDER**

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[22] Filed: **Oct. 7, 1970**

[21] Appl. No.: **78,746**

[52] **U.S. Cl.** **220/22.4,** 211/51, 312/183

[51] **Int. Cl.** **B65d 1/24**

[58] **Field of Search** 312/61, 183, 193, 50; 217/7; 220/22, 22.3, 22.4; 297/390; 211/51, 43; 206/74, 73

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[57] **ABSTRACT**

A drawer divider includes self-contained mounting means defined by a displaceable lock bar, the ends of which normally project from the side edges of the divider to engage selected openings provided in the drawer side walls. To remove or re-locate the divider, an intermediate section of the lock bar is manually deflected transversely to withdraw the locking ends of the bar from the drawer openings.

6 Claims, 6 Drawing Figures

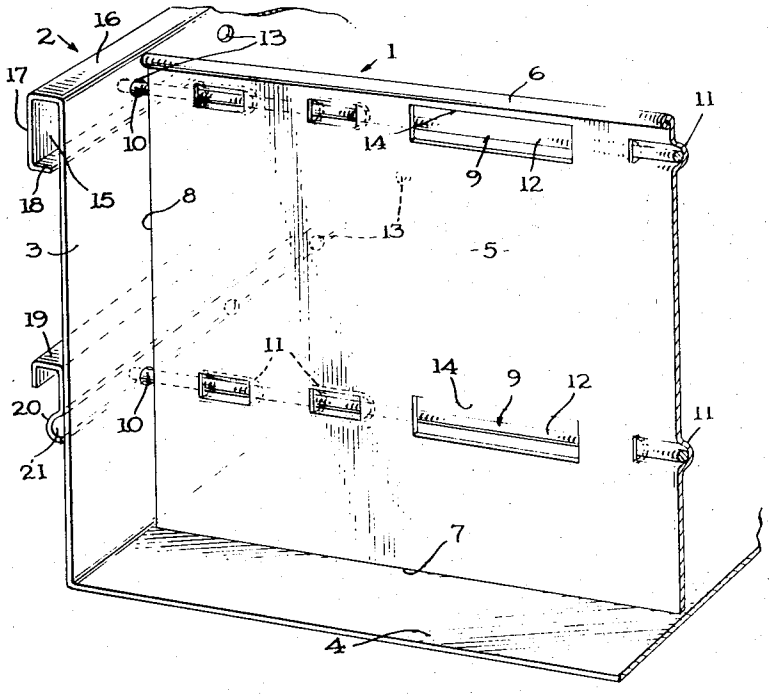
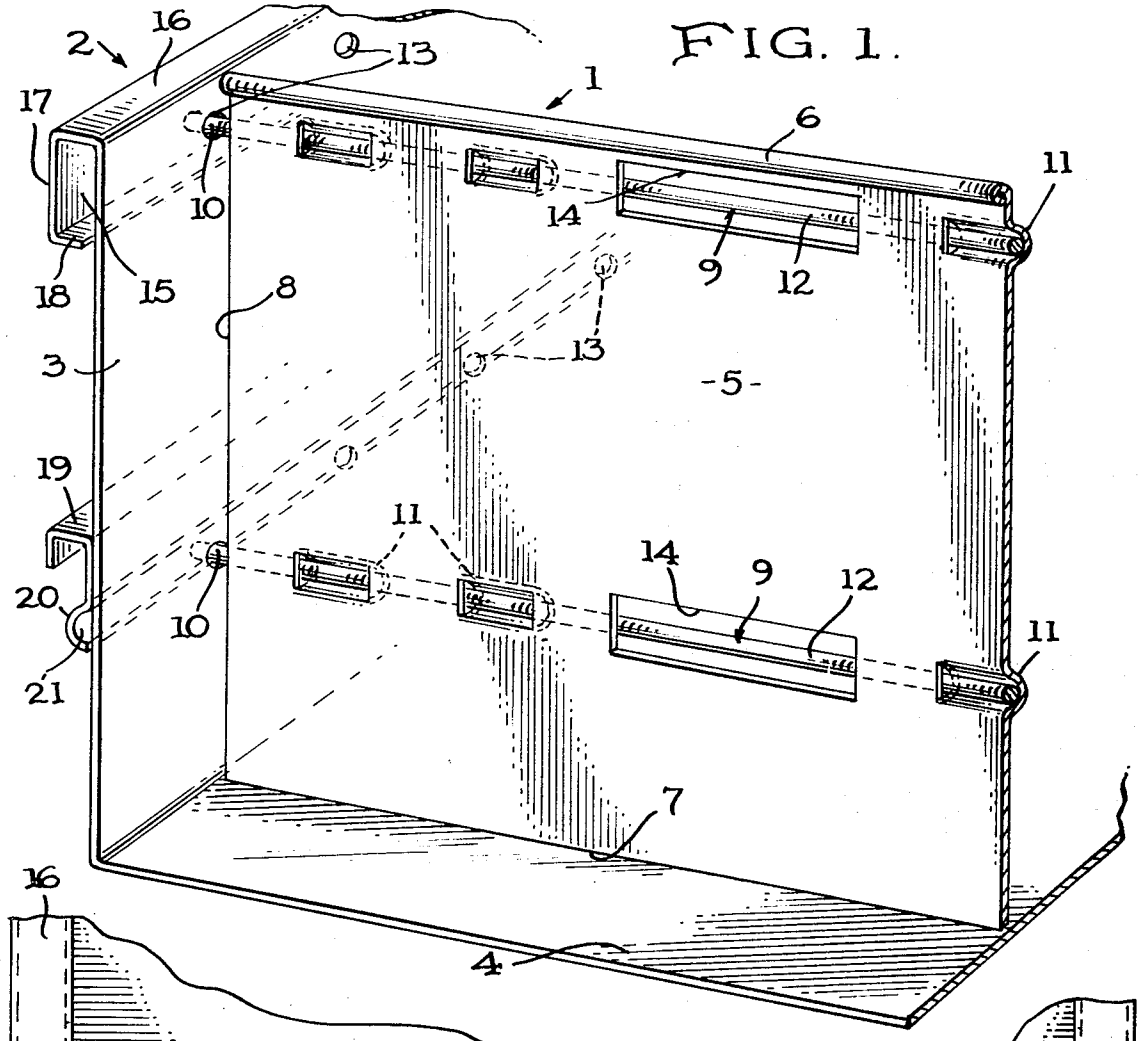


FIG. 1.



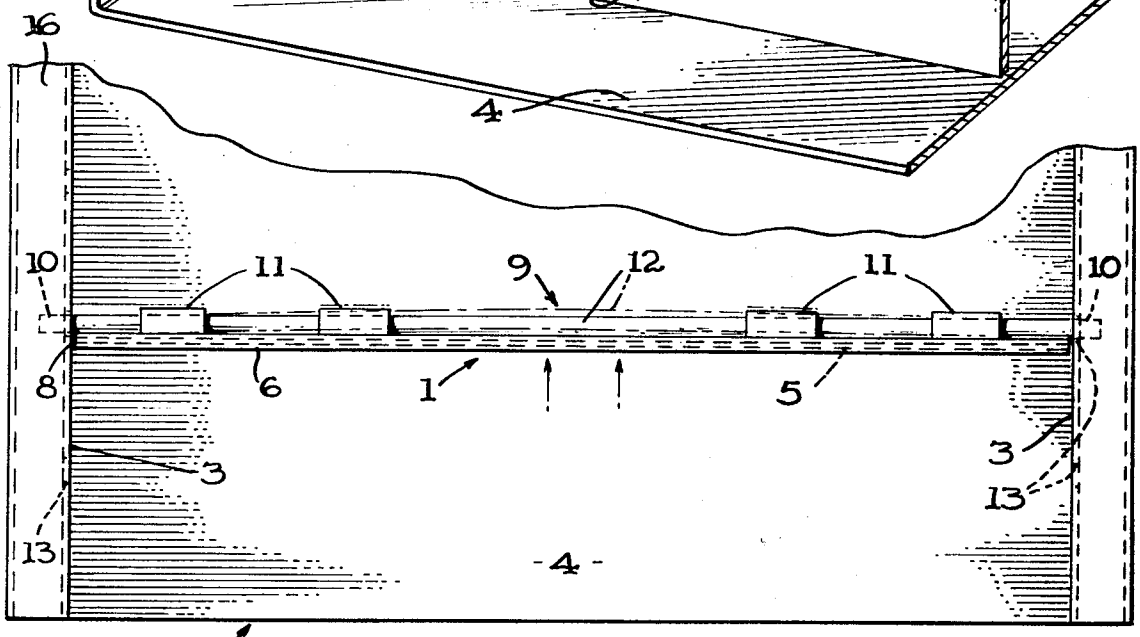


FIG. 2.

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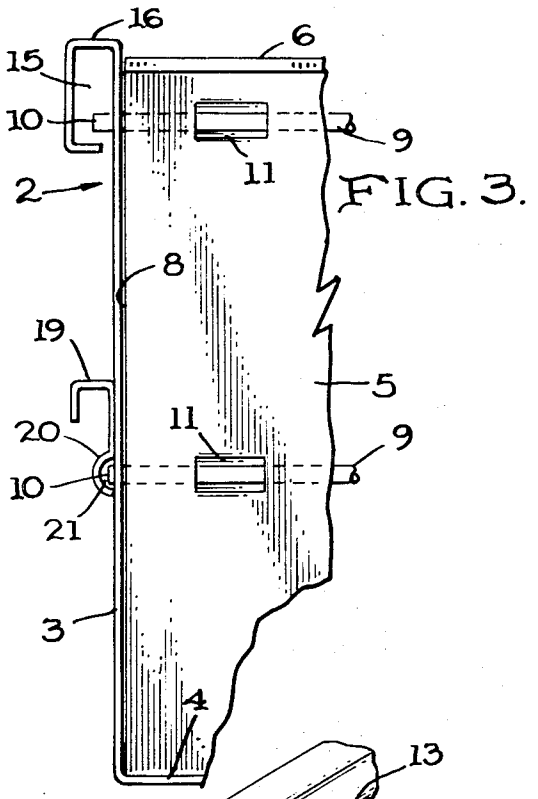


FIG. 3.

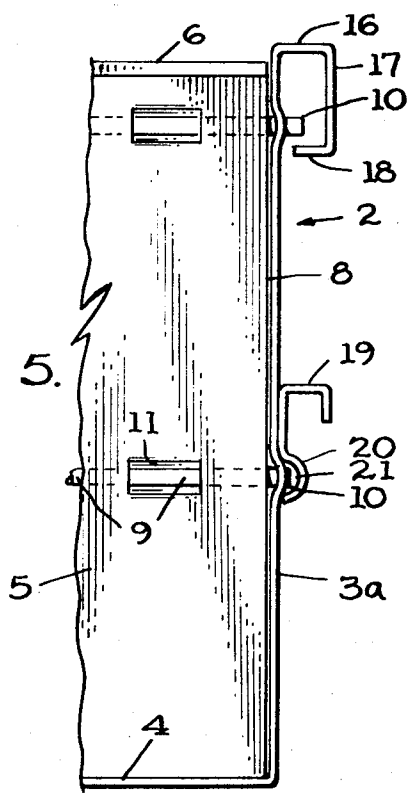


FIG. 5.

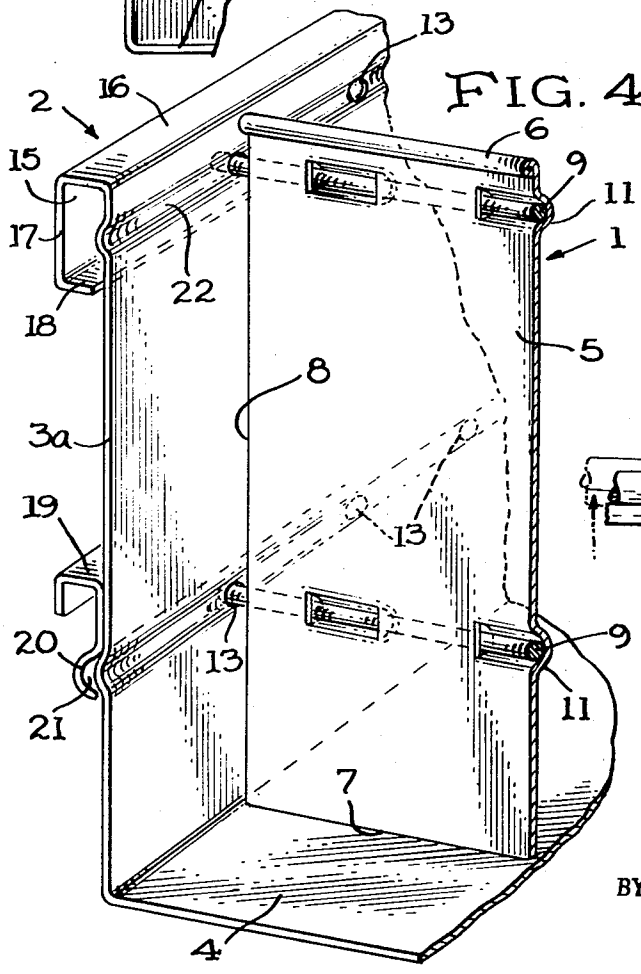


FIG. 4.

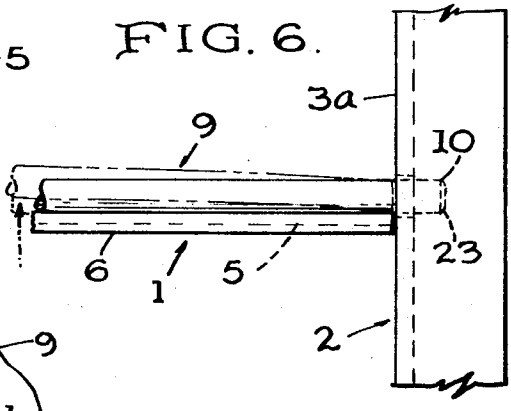


FIG. 6.

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DRAWER DIVIDER

This invention relates generally to receptacles provided with a movable partition, and more particularly to an open top receptacle such as a desk or cabinet drawer having a divider including manipulatable attaching means to permit the selective positioning of the divider in a transverse manner between two opposite walls of the receptacle.

Many prior attempts have been made to provide means permitting the ready manipulation of divider elements within open top receptacles such as desk or filing drawers. Several of these previous arrangements have involved the formation of either specifically constructed drawer side walls and/or a specific separate mounting device required to be inserted between the partition sides or bottom and the juxtaposed walls of the drawer. By the present arrangement, a divider or partition is provided with a rod-like locking member of flexible material, which when at rest, is normally of greater length than the distance between the opposite side walls of the drawer, and which when transversely deflected in its medial area, selectively causes the ends of the rod to engage and disengage pre-formed openings in the side walls of the drawer. As will appear later, the invention contemplates simple and practical manufacturing procedures in adapting the side walls of the drawer to accept the novel divider, while the divider itself is readily formed with suitable means permitting the support of and manipulation of the locking member.

Accordingly, one of the objects of the present invention is to provide a drawer divider carrying an improved mounting element formed from a single piece of rod-like material.

A further objects is to provide a drawer structure including openings in the side walls thereof wherein the divider may be readily slidably adjusted longitudinally to a selected upright position in the drawer without the necessity of lifting the divider during such adjustment.

Another object of the present invention is to provide locking means in a divider comprising a resilient rod slidably carried by the divider and which at rest, projects from both sides of the divider but which may be transversely deflected to withdraw the rod ends from their normally projecting positions.

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.

In the drawings:

FIG. 1 is an enlarged fragmentary perspective view of the divider in selected locked position in the drawer.

FIG. 2 is a top plan view of the components shown in FIG. 1.

FIG. 3 is a detail fragmentary left front elevation of the construction shown in FIG. 1.

FIG. 4 is a fragmentary perspective of an alternate form of drawer side wall.

FIG. 5 is a fragmentary right side front elevation of the alternate form shown in FIG. 4.

FIG. 6 is an enlarged detail view, showing in broken lines, the rod in its alternate normal and deflected positions.

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

Referring to the drawings, particularly FIG. 1, the present invention will be seen to comprise a divider or partition, generally designated 1, adapted to be selectively positioned to and fro within the confines of an open top receptacle such as the drawer, generally designated 2. Any appropriate drawer construction may be utilized, including a pair of vertical spaced apart side walls 3 joined by a suitable horizontal bottom wall 4. The divider 1 associated with the drawer 2 may be constructed of any suitable rigid material such as metal, and includes a panel 5 having horizontal and parallel top and bottom edges 6 and 7, respectively. The oppositely disposed vertical side edges 8—8 are located in a manner to permit a close sliding fit of the divider 1 when disposed in a transverse manner between the oppositely disposed drawer side walls 3—3.

The mounting means for positioning and retaining the divider 1 in its selected position within the drawer includes a horizontally disposed lock rod 9 which preferably is utilized in pairs with each divider member. The lock rod 9 functions as a spring device and comprises a unitary element of tubular construction such as the cylindrical configuration illustrated in the drawings and may be formed from any suitable composition possessing an inherent degree of flexibility or resilience such as metal or plastic.

The rod 9 will be seen to be carried by the panel 5 in a manner which permits transverse displacement of a portion of its body whereby the end portions 10—10 thereof may be alternately longitudinally withdrawn or displaced. This action will be understood from a consideration of the supporting means for the lock rod 9 which comprises a plurality of loop elements 11 extending outwardly from one face of the panel 5 to provide journal means for the lock rod 9 while at the same time limiting vertical or transverse displacement of the rod in the area of its end portions 10. In order to insure this limit of any vertical displacement of the end portion 10 during subsequent transverse displacement of the medial portion 12 of the rod, it is recommended that a pair of the loop elements 11 be provided on opposite sides of the intermediate rod portion 12 with at least one of each said pair of loop elements 11 being disposed substantially adjacent each panel side edge 8.

The attachment of the aforedescribed divider 1 is achieved by providing anchor means in the form of a plurality of keeper holes 13 in the drawer side walls 3 at a level corresponding to the height of the rod end portions 10 when the divider is positioned with its bottom edge 7 juxtaposed the drawer bottom wall 4. Each of the holes 13 is preferably of a diameter only slightly larger than the diameter of the rod end portions 10 for reasons which will become obvious. The rod 9 may generally be described as a manually contractible and self-extending member. When this rod is in its normal at-rest condition and thus assumes a straight longitudinal axis, the outer face of the end portions 10 will each project a significant distance from the vertical side edges 8 such that it will be necessary to displace each of these end portions inwardly before the divider 1 may be inserted perpendicularly between the drawer side walls. This displacement is achieved by transversely deflecting the intermediate portion 12 of the rod against the force of its natural resilience so that the rod end portions 10 will be noticeably withdrawn within the confines of the side edges 8 of the divider panel 5.

To facilitate the above displacement of the lock rod 9, a horizontally disposed finger access opening 14 is provided through the panel 5 juxtaposed the intermediate portion 12 of the lock rod as shown most clearly in FIG. 1 such that the user may readily insert one or more fingers through this opening 14 to horizontally and transversely displace this portion of the rod during the operation of the present invention. The aforementioned displacement of the rod is depicted by the broken lines in FIG. 2 while the full line representation of the lock rod 9 establishes the outwardly projecting position of the rod end portions 10 when the rod is in its normal at-rest condition whereupon the divider 1 is rigidly locked in place within the drawer with the two end portions 10 nested within respective keeper holes 13.

To provide a more attractive appearance, all of the holes 13 are preferably masked from the outside of the drawer 2. In the case of the uppermost row of openings 13, it will be seen these are shielded within the pocket 15 formed by the top flange 16, side flange 17 and inturned lip 18 at the top of the drawer side wall 3. Similarly, the rail 19 attached to the intermediate portion of the outside of the drawer side wall 3 and which is associated with the drawer suspension system (not shown) includes a cover plate 20 defining a shielded pocket 21 overlying the lowermost row of openings 13 through the drawer side wall 3. Quite obviously, the lateral extent of each of the shielded pockets 15 and 21 is no less than the length of the end portion 10 of the lock rod 9 that will project through the openings 13 in the drawer side walls.

The embodiment illustrated in FIGS. 4—6 incorporates the same divider 1 as previously described but illustrates a modification with respect to the drawer side walls wherein it will be seen that the side walls 3a include a horizontal or longitudinally extending groove 22 defining a recessed area on the inner surface of the drawer side wall which passes through the center point of all of the holes 13 therethrough. With this arrangement, it will be understood that during the operation of the invention, the divider 1 may be positioned at any point within the drawer confines which is in the general area of desired adjustment whereupon the user may release the finger pressure upon the intermediate portion 12 of the lock rod 9 and thence move the divider either forwardly or rearwardly a short distance until the end portions 10 of the rod are juxtaposed the next adjacent openings 13 whereupon these end portions 10 will enter the openings 13 in a snap-fashion manner to rigidly position the divider in a fixed upright manner. To facilitate the locking of the rod 9 within its respective opposed openings 13, the end portions 10 of the rod are preferably tapered or rounded as at 23, as shown most clearly in FIG. 6. This feature serves to assist the released rod to channel itself into the openings 13 which as previously described are only slightly larger than the configuration of the rod itself.

When a divider is in position within a drawer and the lock rods 9 are in their normal or at-rest condition, it will be noted that the terminal rod portions 10 extend into the pocket areas 15 and 21 a distance which is preferably an amount greater than one-half the lateral space within each pocket. This arrangement will insure retention of a locked divider by both ends 10 of each rod 9 even through one end 10 may be axially shifted into abutment with the side flange 17 or cover plate 20. Additionally, alternate means may be provided for restricting the axial displacement of the rods 9 such as by the application of a deformation or lock collar (not shown) to each rod adjacent one or more of the loop elements 11.

By providing a pair of lock rods 9 for each divider 1, it will be appreciated that maximum stability will be imparted to the locked divider, a feature particularly desirable when the divider is under load as applied by drawer contents.

I claim:

1. In an open top receptacle having a bottom wall and a pair of spaced apart side walls, a divider transverse between said side walls and selectively movable therebetween, said divider including a panel having side edges, locking means carried by said divider panel and having end portions to retain said divider in selected position, said locking means including a unitary rod member mounted on said panel with said end portions thereof normally disposed beyond said side edges whereby said rod member has a normal length greater than the horizontal length of said divider when axially extended, said rod member being flexible yet normally self-sustaining along a straight longitudinal axis, anchor means on said side walls for receiving said end portions when extended beyond said panel side edges, said anchor means including a plurality of keeper holes in said drawer side walls, displaceable means on said locking means manipulatable to retract and extend said end portions upon movement of said divider between selected opposed pairs of said anchor means, said panel including an access opening and longitudinal journal means supporting said rod member for longitudinal movement, said displaceable means comprising an intermediate portion of said rod member disposed between a pair of said journal means and juxtaposed said access opening whereby, said rod intermediate portion may be radially displaced in any one of several directions in the area of said access opening to bend said rod between said longitudinal journal means thereby foreshortening said rod end portions to withdraw same from said keeper holes.

2. An open top receptacle according to claim 1 wherein, said keeper holes are aligned in a row within a horizontal groove formed in the inner surface of said side walls.

3. An open top receptacle according to claim 1 wherein, said rod member end portions are provided with rounded edges.

4. An open top receptacle according to claim 1 including, means on the outer surface of said side walls shielding said keeper holes.

5. An open top receptacle according to claim 1 including, a pair of said rod members vertically spaced apart on said panel, said panel having a pair of access openings juxtaposed said pair of rod members and said keeper holes are disposed in linear rows opposite each of said end portions of said pairs of rod members.

6. An open top receptacle according to claim 4 wherein, said side wall means provides an enclosed pocket and the axial extent of said rod member when disposed through a pair of said keeper holes and within said pockets is less than the distance between said opposed side wall means.

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