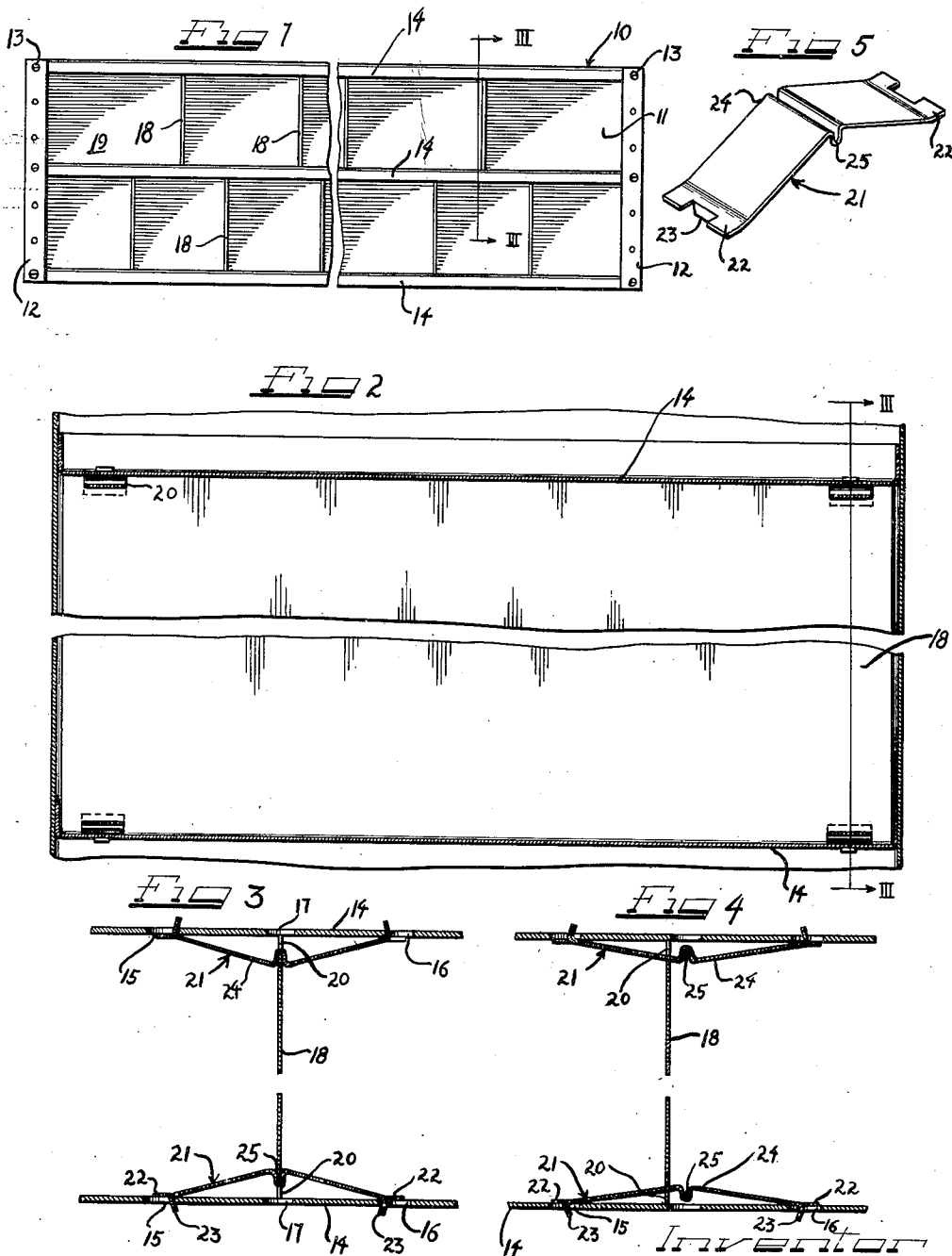


March 14, 1950

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SHELF AND DIVIDER ASSEMBLY AND SPRING
CLIP ANCHORING MEANS THEREFOR
Filed March 23, 1946

2,500,309



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SHELF AND DIVIDER ASSEMBLY AND
SPRING CLIP ANCHORING MEANS
THEREFOR

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Application March 23, 1946, Serial No. 656,615

6 Claims. (Cl. 211—184)

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This invention relates to a shelf and divider assembly and a spring clip anchoring means therefor. More particularly, the invention relates to a novel construction of the shelves and dividers for a parts bin, or the like, and to the novel construction of a spring clip for use with said shelves and dividers as an anchoring means for the dividers. The arrangement is such that the spring clips can be anchored at spaced distances along the shelves, utilizing the resiliency of the clips in positioning them or removing them, and the dividers moved into or out of engaging relationship with said clips by flexing the same to the necessary extent.

It is therefore an important object of this invention to provide a shelf and divider assembly and a spring clip anchoring means therefor of novel and improved construction, facilitating the setting up shelves and dividers to form parts bins of the desired cubicle content to accommodate different types or sizes of parts.

It is a further important object of this invention to provide a spring clip of simple yet rugged construction and having an inherent resiliency adapting it for use as an anchoring means for shelf dividers.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

On the drawings:

Figure 1 is a broken elevational view of a parts bin the construction of which embodies the shelf and divider assembly and spring clip anchoring means therefor of my present invention.

Figure 2 is an enlarged, broken, sectional view taken substantially along the line II—II of Figure 1.

Figure 3 is a broken, fragmentary sectional view taken substantially along the line III—III of Figure 2.

Figure 4 is a broken, fragmentary sectional view, similar to Figure 3 but illustrating the assembly of the device into anchored position between spring slips embodying my invention.

Figure 5 is a perspective plan view of one of my spring clips.

As shown on the drawings:

The reference numeral 10 indicates, as a whole, a parts bin made up of a shelf and divider assembly and using spring clip anchoring means embodying my present invention. Said parts bin 10 comprises a shelf supporting member consisting of a rear wall 11 and end walls provided with rear and front flanges 12. Said flanges 12 are apertured for the insertion of shelf supporting means 13, between which extend shelves 14. Each of the shelves 14 is provided with sets of apertures, each set including a pair of spaced apertures 15 and 16 and an intermediate aperture 17 (Figs. 3 and 4). The sets of apertures in all

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of the shelves are so positioned as to be vertically aligned when the shelves are in assembled relationship in the shelf supporting member 11.

A plurality of dividers 18 are arranged between adjacent shelves 14, in vertical position so as to form cubby holes or bins 19 for receiving articles to be stored therein. Each of the dividers 18 is a flat sheet of metal, or other suitable material, extending the full depth of the parts bin 10 and substantially the full height between successive shelves 14. Each of the dividers 18 is provided along its longitudinally extending edges with a rectangular recess, indicated at 20, a pair of such recesses being formed along each horizontally extending edge toward the ends of said edge.

A spring clip, indicated as a whole by the reference numeral 21, is provided for engagement with the inner edge of each of said recesses 20. Each spring clip 21, as best illustrated in Figure 5, comprises end portions 22 that extend in opposite directions and that lie in substantially the same plane. Intermediate portions of said end portions 22 are bent downwardly to provide downwardly and backwardly turned tongues 23. The material between said end portions 22, 22 is bowed upwardly from the plane of said end portions to provide an arched intermediate portion 24. Midway between said end portions 22, 22, the intermediate portion 24 is provided with a transversely extending, U-shaped groove 25, the material of the intermediate portion being bent sharply downwardly to provide such groove. The spring clip 21 may suitably be formed of resilient material, such as an initially flat strip or sheet of spring steel. The strip or sheet is then cut and portions thereof bent or otherwise suitably formed to provide the one-piece clip just described.

In assembling the dividers 18 in position between adjacent shelves 14, the requisite number of spring clips 21 are positioned at the desired points along the shelves 14. Each of the spring clips 21 is positioned in place by slipping one of its tongues 23 into a slot 15, or 16, then applying pressure to the intermediate portion 24 to spread the clip and cause the other tongue 23 to slip into the other slot, either 16 or 15. The intermediate portion 24 is sufficiently bowed in the first instance and is of sufficient resiliency to enable the tongues 23, 23 to span the holes 15 and 16 in each set of apertures, as is illustrated in Figures 3 and 4. Figure 4, in particular, illustrates the position assumed by a spring clip when the intermediate portion 24 thereof is pressed in the direction of the adjacent shelf 14. During this spreading action, the end portions 22 span the openings 15 and 16 to lie in close contact with the adjacent shelf surface.

After the spring clips 21 have been inserted in the proper position, the dividers 18 are next moved

into anchoring engagement with the clips. Again, as illustrated in Figure 4, this is accomplished by sliding a divider 18, while held in vertical position, between a pair of opposed clips, the recesses 20 along the edges of said divider receiving the intermediate portions of the clips and the inner edges of said recesses sliding upwardly along the inclined surfaces of said clip intermediate portions. The clip intermediate portions under the spreading force exerted by the divider flex toward the adjacent shelf into the positions illustrated in Figure 4, until finally the edges of the recesses 20 ride into the grooves 25, as illustrated in Figure 3, whereupon the spring clips 21 are free to return to their normal arched shape due to their own inherent resiliency. In the position illustrated in Figure 3, the divider 18 is firmly and securely anchored between opposed spring clips 21 with the recessed edges of the divider extending into the grooves 25.

The purpose of the intermediate slots or openings 17 is to provide clearance for the back walls of the groove 25, should it be necessary to flex the intermediate portions 24 of the spring clips 21 into substantially the same plane as the plane of the end portions 22, either in inserting the clips into place on the shelf or inserting the dividers 18 into anchored position.

To remove a divider, 18, one or both of the associated spring clips 21 is manually pressed toward the adjacent shelf or shelves to spread the clips apart and permit the recessed edges of the divider to be moved out of the groove 25 and down along the intermediate sloping portions of the clips. The action is merely the reverse of that previously described and illustrated in Figure 4 for the insertion of a spring clip into place.

The sets of slots 15, 16 and 17 are, of course, placed at conveniently spaced intervals along the lengths of the shelves 14, so that the dividers can be positioned with the desired spacing therebetween.

It will, of course, be understood that various details of construction may be varied through a wide range without departing from the principles of this invention and it is, therefore, not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A shelf and divider assembly comprising a shelf having spaced slots, a divider having spaced recesses along a horizontally extending edge thereof, and a spring clip having tongues for anchoring in said slots and having a bowed intermediate portion for resilient engagement in one of said edge recesses whereby the divider is connected to said shelf.

2. A shelf and divider assembly comprising a shelf having spaced slots, a divider having spaced recesses along a horizontally extending edge thereof, and a spring clip having tongues for anchoring in said slots and having a bowed intermediate portion provided with a reversely bent loop forming a pocket for the reception of a recessed edge of said divider whereby the divider is connected to said shelf, said pocket engaging in a corresponding recess.

3. A shelf and divider assembly comprising a pair of shelves having vertically aligned slots, a divider having recessed horizontal edges for mounting between said shelves and spring clips for anchoring in said slots and engagement with said recessed edges, each of said clips having offset tongues for anchoring in said slots and having

a bowed intermediate portion grooved for receiving said recessed edges whereby the divider is connected to said shelves, said intermediate bowed portion engaging in a corresponding recess.

4. A shelf and divider assembly comprising a pair of shelves having vertically aligned slots, a divider having recessed horizontal edges for mounting between said shelves and spring clips for anchoring in said slots and engagement with said recessed edges, each of said clips having offset tongues for anchoring in said slots and having a bowed intermediate portion grooved for receiving said recessed edges whereby the divider is connected to said shelves, the depth of said recesses being sufficient to permit said recessed edges to slide up said intermediate bowed portion with flexing thereof when mounting said divider in place, said intermediate bowed portion engaging in a corresponding recess.

5. A shelf and divider assembly comprising a pair of shelves having sets of slots arranged for vertical alignment, a divider defining shelf contacting edges for mounting vertically between said shelves, said divider having spaced recesses along its shelf-contacting edges, and spring clips for positioning and anchoring said divider in place, each clip having tongues engageable in the slots of said shelves and an intermediate bowed portion provided with a transversely extending pocket for receiving the inner edges of said recesses whereby the divider is connected to said shelves.

6. A shelf and divider assembly comprising a pair of shelves having sets of slots arranged for vertical alignment, a divider defining shelf contacting edges for mounting vertically between said shelves, said divider having spaced recesses along its shelf-contacting edges, and spring clips for positioning and anchoring said divider in place, each clip having tongues engageable in the slots of said shelves and an intermediate bowed portion provided with a transversely extending pocket for receiving the inner edges of said recesses whereby the divider is connected to the said shelves, said bowed portion having sufficient resiliency to be flexed toward the adjacent shelf as said divider is moved therealong into the pocket and said shelves having slots intermediate the other slots in each set for providing clearances for the backs of said pockets during the aforesaid flexing action.

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