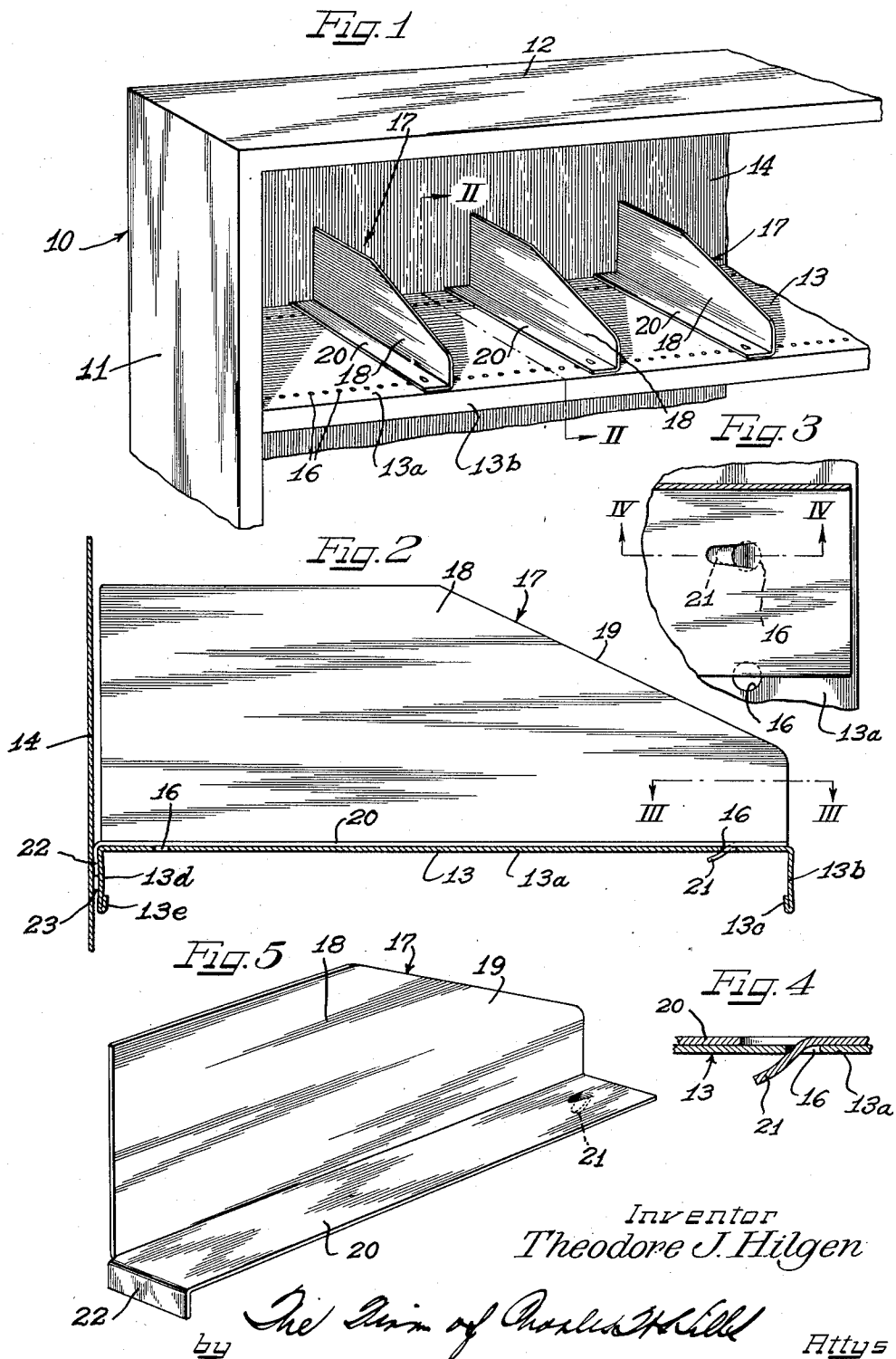


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ADJUSTABLE SHELF DIVIDER

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ADJUSTABLE SHELF DIVIDER

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1

This invention relates generally to steel shelving apparatus and bin units and more particularly to a novel and improved adjustable shelf divider which may be resiliently clamped and locked along the length of the shelf in a shelf assembly.

According to the general features of the present invention, an adjustable shelf divider is provided with a flange portion adapted to rest on the top of a shelf, the shelf portion having a small tongue struck downwardly therefrom to enter and engage one of a plurality of openings spaced apart from one another in general alignment along the length of a shelf. A downwardly turned flange at the rear of the divider is also provided to clamp on the rear edge of the shelf. Thus, the adjustable shelf divider may be resiliently clamped and locked anywhere along the length of the shelf in order to form such a compartment in a bin unit.

It is an object of the present invention, therefore, to provide a novel and improved adjustable shelf divider for a bin unit which may be adjustably positioned along the length of the shelf and resiliently locked and clamped thereto.

Another object of the present invention is to provide an adjustable shelf divider which may be economically produced from sheet metal and which integrally embodies a locking structure which permits the shelf divider to be adjustably positioned along the length of the shelf.

Many other advantages, features and additional objects of the present invention will become manifest to those versed in the art upon making reference to the detailed description which follows and the accompanying sheet of drawings to which a preferred embodiment of a shelf divider assembly of the present invention is shown.

On the drawings:

Figure 1 is a broken isometric view of a bin unit according to the present invention;

Figure 2 is a fragmentary cross-sectional view with parts in elevation taken on line II-II of Figure 1;

Figure 3 is a fragmentary cross-sectional enlarged view taken on line III-III of Figure 2;

Figure 4 is a cross-sectional enlarged fragmentary view taken on line IV-IV of Figure 3; and

Figure 5 is an isometric view of an adjustable shelf divider according to the present invention.

As shown on the drawings:

In Figure 1 a bin unit is indicated generally by the reference character 10 and includes the

2

usual uprights, one of which being shown at 11 having a top cross member 12 therebetween as well as a plurality of shelves, one of such shelves being shown at 13. If desired, the rear of the bin may be closed by a wall 14.

The structure of the shelf 13 may be clearly seen in Figures 1, 2 and 3, the shelf 13 comprising a sheet of metal shaped to define a body portion 13a with a front flange 13b turned down therefrom and terminating in a lip 13c and a rear flange 13d bent down therefrom terminating in a lip 13e. The flanges 13b and 13d serve to rigidify the shelf 13. The lips 13c and 13e not only add to the decorative appearance of the shelf 13, but remove the sharp edge portion from the terminal ends of the flanges 13b and 13d.

The shelf 13 is provided with a plurality of apertures 16 which are spaced apart from one another and are coaxially aligned along the length of the shelf 13. In the embodiment shown in the drawings, two rows of apertures 16 are shown, however, it should be understood that only one row of apertures need be provided and additional rows of apertures may be provided if desired.

The shelf divider of the present invention is indicated generally by the reference numeral 17 and includes a divider partition 18 which is generally rectangular and formed out of a piece of sheet metal. One corner of the divider partition 18 may be removed to provide an inclined edge 19, the resulting partition configuration being desirable in a bin unit assembly for the storage of parts and other small articles.

The lower portion of the divider partition 18 terminates in a flange 20 which is bent at substantially right angles to the divider partition 18 and arranged to rest on the top of the shelf 13, the flange 20 abuttingly engaging the body 13a of the shelf 13. Thus, the divider partition 18 will be supported uprightly by the flange 20, thereby serving to form, together with other divider partitions, a plurality of compartments along the length of the shelf 13.

It will be understood that the divider partition 18 may be inclined to the right or left should the type or shape of the material to be stored in the bins so require.

In order to firmly retain the shelf divider 17 in adjusted position along the length of the shelf 13, a small tongue 21 is struck downwardly from the flange 20 and is arranged to enter one of the apertures 16 formed in the shelf 13 and to engage the edge portions of such apertures 16. It will be readily understood that the tongue 21

need not be formed from the material of the flange 20 but could be provided by a separate part attached to the flange at the same location.

The tongue 21 in the flange 20 of the divider 17 will ordinarily be sufficient to retain the divider 17 in firm assembly with the shelf 13. According to the principles of the present invention, however, an additional locking flange 22 may be provided at one end of the divider 17 to clamp over the edge of the shelf 13 by engaging the flange 13d formed at the rear of the shelf body 13a. The locking flange 22 may be conveniently formed by bending the end portion of the flange 20 downwardly at substantially right angles thereto.

If additional retaining means are necessary, a second tongue 21, similar to the first tongue 21, may be struck downwardly from the flange 20 in a position for engaging one of the apertures 16 in the rearward row.

It will be noted that the tongue 21 in the flange 20 may be preferably formed so as to extend rearwardly towards the flange 22. Thus, in positioning the divider 17 on the shelf 13, the tongue 21 may be inserted through the apertures 16 and the front end of the divider 17 may thus be placed in contacting relationship to the front end of the shelf body 13a, whereupon the divider 17 may be lowered so that the flange 22 will clamp over the rear edge of the shelf 13 to resiliently lock the divider 17 to the shelf 13. In some applications it may be preferable to have the tongue 21 extend straight downwardly or forwardly and in such applications the positioning procedure will be changed accordingly.

It will be appreciated that if the clamping attachment provided by the locking flange 22 is to be employed, the bin unit 10 is constructed to provide a suitable recess 23 between the rear wall 14 and the flange 13d of the shelf 13 to receive the locking flange 22 of the divider 17.

Although I have resorted to detail in the description of the structural embodiment of the principles of my invention, it should be understood that I wish to embrace within the scope of this patent all structures and modifications as reasonably and properly come within the scope of my contributions to the art.

I claim as my invention:

1. In a shelf assembly, a sheet metal shelf having opposite edges, a shelf divider having an upstanding divider flange and an angular lower marginal flange extending throughout substantially the length of said upstanding divider flange and engageable flatwise upon the top of the shelf, said angular flange having adjacent one end thereof a downwardly directed narrow tapering tongue sloping obliquely generally toward the opposite end of said angular flange, said shelf

having a small aperture adjacent to one of its edges within which said tongue is retainingly engageable by engaging the edge defining said aperture remote from said edge of the shelf, and a depending flange on said opposite end of said angular flange engageable retainingly with the opposite edge of said shelf, said edge of the aperture engaged by said tongue and said opposite edge of the shelf being spaced apart relative to the spacing between the portion of the tongue engaging said aperture edge and the inside face of said depending flange to compel resilient clamping engagement of the tongue and depending flange with said aperture edge and said opposite shelf edge.

2. In a shelf assembly, a sheet metal shelf having opposite edges, a shelf divider having an upstanding divider flange and an angular lower marginal flange extending throughout substantially the length of said upstanding divider flange and engageable flatwise upon the top of the shelf, said angular flange having adjacent one end thereof a downwardly directed narrow tapering tongue sloping obliquely generally toward the opposite end of said angular flange, said shelf having a small aperture adjacent to one of its edges within which said tongue is retainingly engageable by engaging the edge defining said aperture remote from said edge of the shelf, and a depending flange on said opposite end of said angular flange engageable retainingly with the opposite edge of said shelf, said edge of the aperture engaged by said tongue and said opposite edge of the shelf being spaced apart relative to the spacing between the portion of the tongue engaging said aperture edge and the inside face of said depending flange to compel resilient clamping engagement of the tongue and depending flange with said aperture edge and said opposite shelf edge, said tongue being of concave cam surface on the upper obliquely sloping surface thereof for assisting in assembly and disassembly of the divider with respect to the shelf and for effective camming inter-engagement with said aperture edge under the resilient locking influence of said depending flange engaging said opposite shelf edge.

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