This invention relates to adjustable and removable compartment and partition devices for trays.

Trays constitute an essential element in workmen's tool boxes, cash boxes, fishing tackle chests and chests or boxes for general utility purposes. These trays are usually rather shallow and elongated and adapted to hold a variety of small items such as screws, nuts, nails, coins, stamps, small tools, etc.

In order to segregate these small items and articles and make them readily accessible in the trays, it has been proposed to provide a substantially flat plate with vertically upturned sides to partition the tray and thus form a compartment.

One of these partitions or compartments can be used in a tray at various positions or locations to receive certain segregated articles therein.

The problem in connection with the positioning and holding of the flat partitioning plate with vertically upturned sides in trays and preventing accidental displacement of the partitions, is one that is ever present with the prior art devices. These partitions frequently come loose and are accidentally displaced and the segregated articles in the compartment formed by the partition are intermingled with other articles in the tray and the workman or user has to sort and pick out, say, small items such as screws, nuts, nails, coins, stamps, etc., from amongst all the other articles.

The adjustable and removable compartment and partition device as embodied in my invention overcomes all of the objectionable features of the prior art devices. I provide a simple device which not only partitions the tray but also forms a definite compartment by means of partitions. Moreover, the attaching and securing of my device in place, due to its inherent structural characteristics, the intermingling of small nuts, screws, nails, coins, etc., and the like with other articles in the tray is positively prevented, the said articles being at all times maintained within the compartment formed by means of partitions.

The primary object of my invention, therefore, is to provide an adjustable and removable compartment forming and partition device for use in trays or similar containers.

Another object of my invention is to provide an adjustable and removable compartment and partition device whereby when the same is associated with a tray or the like, a definite compartment will be formed between two walls which form the partitioning for a portion of the length of the tray.

Another object of my invention is to provide an adjustable and removable compartment and partition device wherein, due to the inherent characteristics thereof, the same will be securely and firmly held in position when inserted in or associated with the tray.

Another object of my invention is to provide an adjustable and removable compartment and partition device for trays wherein the connection of the device with the tray is effected by a simple means and effects a resilient or yielding connection which prevents accidental disassociation of the device from the tray.

Another object of my invention is to provide an adjustable and removable compartment and partition forming device which is readily stamped from sheet metal or similar material and which can be produced economically and rapidly by stamping or other known methods.

Additional objects will become apparent in view of the specification hereinafter.

In the drawing—

Fig. 1 is a perspective view of an elongated, rather shallow tray with my new adjustable and removable compartment and partition forming device inserted in and associated therewith;

Fig. 2 is a top plan view showing the device inserted in the tray;

Fig. 3 is a longitudinal sectional view on the lines 3—3 of Fig. 2;

Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 2;

Fig. 5 is a view of the blank of my adjustable and removable compartment and partition device, before the same has been formed into its final state;

Fig. 6 is a perspective view of the adjustable and removable compartment and partition device; and

Fig. 7 is a detailed view showing the locking tongue depending from the compartment and partition forming device.

The invention will be more readily understood by referring to the drawings in detail, a description of which follows:

The tray T is of conventional formation and as will be seen it is relatively shallow and elongated and is preferably, as shown, of rectangular formation. This tray embodies opposite similarly formed side walls 8, similarly formed end walls 9 and a bottom 10. It is to be noted that the side walls adjacent the bottom 10 are curved as at 11, both interiorly and exteriorly of the tray, and the same is true of the connection of the bottom 10 with the end walls 8. As is usual, the tray is pro-
My adjustable and removable compartment and partition device is best seen in Figs. 1 and 6. The device consists of a substantially flat bottom 13 having at opposite sides thereof integral upstanding partition and compartment forming walls 14 and 15. The respective ends 14a and 15a of the walls 14 and 15 are inclined upwardly from adjacent the bottom of the device and take the shape of the inclined interior opposite side walls of the tray throughout a major portion of their depth and also take the shape of the curved portions 11, which are adjacent opposite sides of the interior of the bottom of the tray. The curved portions of the walls 14 and 15 are denoted at 14b and 15b, respectively.

The major portion of the bottom of the device 13 is flat and is integrally connected with the upstanding walls 14 and 15. However, the opposite ends 13e of the bottom of the device are disconnected from the upstanding side walls 14 and 15, as denoted at 16. The disconnected opposite end portions of the bottom are curved to assume the shape of the interior curved portions 11 of the tray and in effect constitute flexible tongues and provide for the resilient connection of the device with the tray as will be explained hereinafter. The blank from which the adjustable and removable compartment and partition device is formed is clearly shown in Fig. 5 in a flat state and as such can be readily stamped from sheet metal or other suitable material. When the blank is stamped as shown in Fig. 5, it is simply necessary to bend or fold the walls 14 and 15 upwardly so as to place them at substantially right angles with the bottom 13 and then bend or otherwise form the ends of the bottom 13a into the curved position as shown in Fig. 6.

In viewing the device as shown particularly in Fig. 6, it will be seen that the curved tongues which are in effect a continuation of the bottom extend between and substantially register with the curved oppositely disposed lower curved portions 14d and 15b of the respective upstanding walls 14 and 15.

As will be seen, the curved extensions or tongues 13a of the bottom extend upwardly to a point contiguous with the curved bottoms 14d and 15b of the walls 14 and 15 and terminate considerably below the upper edges of the walls 14 and 15. Thus formed, the device provides a compartment denoted generally at C and the upstanding walls 14 and 15 serve as a means to partition a remaining portion of the tray. It is preferable that the top portion of the walls of the device extend only to the top head 12 of the tray. In other words, the device, when inserted within the tray, is flush with the top of the tray.

The adjustable and removable compartment and partition forming device is provided in its bottom with a depending securing and locking tab 17. This securing and locking tab is preferably stamped from the material of the bottom 13 and is pressed downwardly to form a shoulder port 18 and a portion 19 which extends substantially parallel with the bottom of the tray when the device is inserted therein. It is to be understood that the securing and locking tab 17 is merely an illustration of one way for securing and locking the device in its association with the tray. Other means, such as a bayonet connection (not shown) may well be used.

The bottom of the tray 10 is provided with suitably spaced openings 20. These openings 20 provide for the locking and securing of the compartment and partition device within the tray and also provide for adjustability whereby the device may be inserted in various locations within the tray.

Apparatus of the type described has several of the advantages and removable compartment and partition device devices can be inserted and associated with the tray. For purposes of illustration I have shown only one of my devices secured within the tray. It is quite obvious that when the device is curved within the tray as shown in Fig. 1, a definite compartment is formed by the device itself within its upstanding walls, and these upstanding walls partition the tray into other compartments whereby various small articles may either be placed in my device or in the other compartments formed in the tray.

In positioning and securing my adjustable and removable compartment and partition device within the tray it is simply necessary to align the depending locking tab 17 with any one of the selected openings 20 in the tray and by positioning the device thereupon with the tongue in alignment and moving the same downwardly within the tray the tongue 17 passes into the opening 20 and then, by a slight sliding forward motion, the tongue engages under the bottom of the tray and the wall of the opening engages the shoulder formation 13, whereby the device is securely held in position.

Then, too, when my device has been inserted within the tray as just described, the downward movement of the device results in the flexible curved tongues 13a resiliently engaging the opposite interior curved bottom portions 11 of the tray and this provides for a very close fit and when the tab 17 has been inserted within the opening 20 and is beneath the bottom of the tray, the tongues 13a provide in effect resilient connection of the device as a whole with the tray.

In other words, when the adjustable and removable compartment and partition device is inserted, the tongues 13a exert a slight pressure on the interior curved side walls 11 of the tray and this tends to provide a flexible connection with the tab 17 holding the device down, whereas the tongues 13a exert a slight upward pressure. In addition to this there is a tendency for the upper edges of the oppositely disposed tongues 13a to bite into or grip the oppositely disposed interior side walls of the tray. This is a further means to prevent any accidental displacement of the device from the tray once it has been inserted therein. Of course, the locking tab 17 plays an important part in securing the device within the tray.

Should it be desirable to disassociate the compartment and partition forming device from the tray, all that is necessary is to grip the device with the fingers, slide the same to the right to release the locking tab 17 from within the opening 20 and lift the device as a unit out of the tray and then re-insert it as hereinafore described.

When one or more of the devices are inserted and locked within the tray it will be seen that the compartment C is formed by the device itself and that portion T' of the interior side walls of the tray. This compartment C then is closed by its bottom and side walls and that portion T' of the side wall of the tray itself and thus prevents accidental displacement of any articles therein.

I claim:

1. An adjustable and removable compartment and partition forming device for trays consist-
ing of a unitary structure embodying a bottom and integrally connected upstanding spaced walls, the bottom having oppositely extending tongues between the upstanding walls, the said tongues and the outer edges of the upstanding walls assuming the shape of the interior contour of the tray, and means for locking the device within the tray.

2. In combination a tray and an adjustable and removable compartment and partition forming device, the tray having a plurality of spaced openings in its bottom, and the device consisting of a bottom and integral upstanding spaced walls extending transversely of the tray, upstanding curved flexible tongues continuing from the bottom of the device and in engagement with similarly formed oppositely disposed side wall portions of the tray, securing and locking means depending from the bottom of the device and positioned interchangeably within one of the openings in the bottom of the tray, whereby the device is resiliently held against accidental displacement within the tray.

3. In combination, a tray and an adjustable and removable compartment and partition forming device, the tray having a plurality of spaced openings in its bottom and the device consisting of a bottom and integral upstanding spaced walls extending transversely of the tray, the bottom and the spaced walls of said device forming a compartment and the device being slidable along the tray, and securing and locking means depending from the bottom of the device and arranged to be positioned interchangeably within the openings in the bottom of the tray, whereby the device is secured in its adjustment and held against accidental displacement.

4. In combination, a tray and an adjustable and removable compartment and partition forming device, the tray having a plurality of spaced openings in its bottom and the device consisting of a bottom and integral upstanding spaced walls extending transversely of the tray, the bottom and the spaced walls of said device forming a compartment and the device being slidable along the tray, and a locking tab depending from the bottom of the device to form a shoulder and extending substantially horizontally to form a locking portion, said locking tab being adapted to be interchangeably positioned in the openings in the bottom of the tray and movable into engagement with the same by a sliding movement of said device.

5. The combination of a tray having a bottom, side and end walls and provided with a plurality of spaced openings in its bottom, and an adjustable and removable partition forming device consisting of a bottom, integral upwardly extending spaced walls and extending transversely of the tray from one side wall to the other to form a compartment, the side edges of the upstanding walls conforming to the configuration of the side walls of the tray and the bottom of the device being provided in the space between the upstanding walls with resilient upwardly extending tongues yieldingly engaging the side walls of the tray and clamping the device therein, the bottom of the device being also provided with an integral locking tab struck from the bottom of the device and adapted to be interchangeably positioned in the spaced openings in the bottom of the tray and cooperating with the resilient tongues in holding the device against accidental displacement.

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