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HOLDER FOR FLANGED CONTAINERS

Filed Feb. 23, 1968

FIG. 1

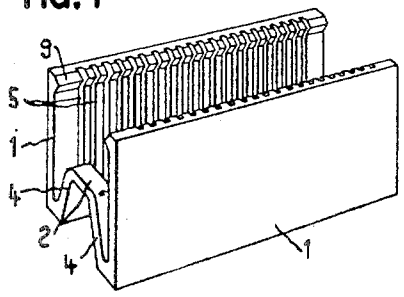


FIG. 2

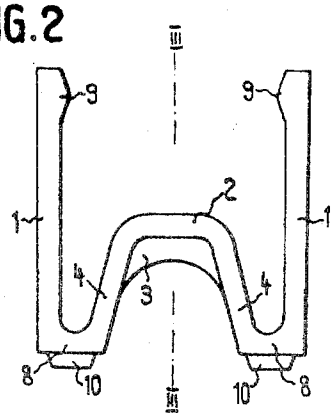


FIG. 3

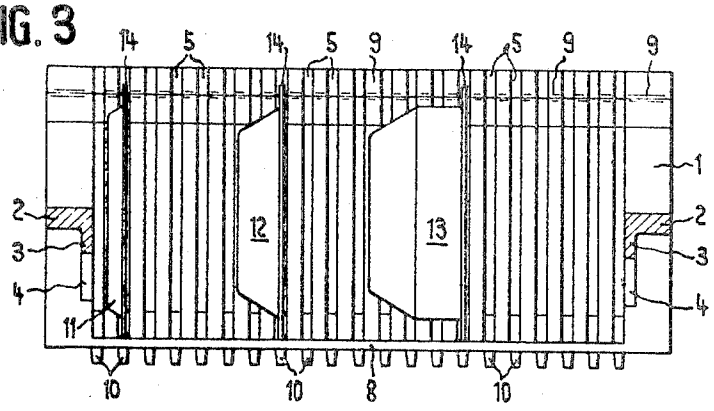
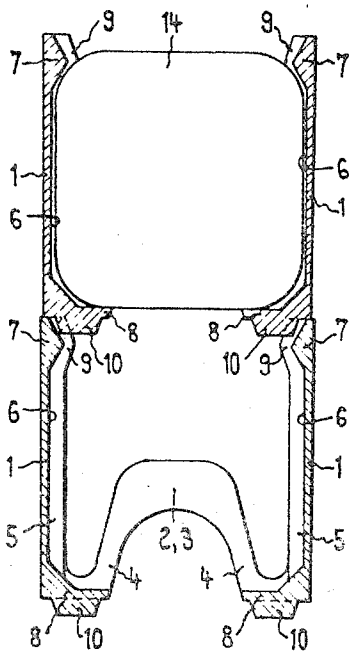


FIG. 4



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HOLDER FOR FLANGED CONTAINERS

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U.S. Cl. 211—71 4 Claims

ABSTRACT OF THE DISCLOSURE

The invention concerns a holder or support comprising two upright walls spaced from each other and held together at their lower ends by elastically yieldable yokes, the inner side of said walls are grooved to receive flanges of containers to be stored, means being provided in said grooves for releasably retaining the flanged containers.

The invention relates to holders open towards the top to receive flanged containers or the like, particularly light containers for small parts, such as, e.g., watch parts.

In watch industry light containers are used for dispatching watch parts, especially spare parts. The bodies of these containers consist for instance of aluminum or of a transparent plastic material such as, e.g., polystyrene or PVC. These bodies have a flange extending all over the upper circumference of the body, and a cover, e.g. of light cardboard or paper is fixed to the flange either by beading or cold or heat sealing. On the cover are printed all the indications necessary for the watch repairers about the contents of the containers or packings. Hitherto, a plurality of such containers has been filled into a box, specially a pasteboard box. These boxes were stored until they were dispatched. The contents of the containers in the boxes had to be indicated by imprints on the boxes. Since the containers consists of very thin aluminum or of breakable plastic material and therefore, are very easily deformable as well as the pasteboard boxes containing them, a great danger of the containers getting crushed occurred. Moreover, the containers were loosely piled one upon another in the boxes and, therefore, only similar or equal containers could be adequately stored in one and the same box.

The invention aims at the removal of all these inconveniences.

The holder or support according to the invention is characterized in that it comprises two opposed holder-parts, such as, e.g. walls elastically connected together for being moved away from and approached to each other, these holder-parts having rests for receiving flange portions of the containers to be stored.

Due to the rests the position of the containers in the holder is secured. The possibiliy of elastically spreading the two holder-parts away from each other allows an easy shifting or drawing of the containers into or from the holder from the top. The holder-parts thereby spread away from each other and automatically approach each other as soon as the container has been entirely shifted into or drawn out of the holder. This safe holding of the containers also allows containers of different height and shape to be stored in one and the same holder. Since the holder is open at the top, the different containers are at once distinguishable.

In a particular embodiment of the invention the two holder-parts in the shape of walls are connected with each other only by two elastically yieldable yokes which are preferably flush with the respective end faces of the holder, so that the holder, if desired, can even be put upright on a support by means of one of its end faces. Since the

end faces, with the exception of the yokes, are open, the indications on the cover of the foremost container can be read, which is of especial advantage if the holder contains only equal or similar containers. If the walls of the holder are transparent and if the holder is open at its underside over its whole length, it is very easy to recognise the kind of containers stored in the holder.

In another embodiment of the invention means can be provided allowing an easy and safe piling of several holders one above another.

The drawing illustrates by way of example, one embodiment of the object of invention, this embodiment serving the purpose of receiving light containers for watch parts.

FIG. 1 is a perspective view of the holder or support, substantially in actual size.

FIG. 2 is a front view of the holder, on an enlarged scale.

FIG. 3 is a vertical longitudinal section along the line III—III of FIG. 2 and

FIG. 4 illustrates a cross-sectional view of two superimposed holders, likewise on an enlarged scale.

The entire holder consists of either transparent or non-transparent plastic material. Two opposed side parts form walls **1**. The only connection between these two walls **1** consists of two elastic yokes **2** being flush with the end faces of the holder and having reinforcing ribs **3** below their webs. In consequence, especially the lower portions of the legs **4** of the yokes **2** are elastically yieldable. Grooves **5** running vertically on the inside of the walls **1** form rests for receiving portions of the containers to be stored. For securing the stored containers from falling out of the holder e.g. if the latter is turned upside down, cams **7** at the top end of the grooves **5** project from the bottom **6** of the grooves **5** into the latter, while the grooves **5** are limited at their bottom ends by internal flanges **8** of the walls **1**. Between the flanges **8** the bottom portion of the holder is entirely open over its whole length. Therefore, the stored containers are not only visible from the top and from the sides (when the walls **1** are transparent), but also from the bottom and in spite of this fact they are securely held in place. Between every two adjacent grooves **5** and at the top end of them bosses **9** project from the walls **1** towards the inside to beyond the edges of the grooves **5**. The flanges **8** have teeth **10** projecting from their bottom surface, which, in the case of superimposed holders, as shown in FIG. 4, are engaged in grooves **5** of the lower holder between adjacent bosses **9** of the latter. By this engagement the position of the holders relatively to each other is secured in longitudinal direction and by the groove bottoms **6** and the teeth **10** also in transverse direction.

FIG. 3 illustrates, how three containers **11**, **12** and **13** of different height are received in the holder. The covers of all these three containers are of rectangular shape, preferably with rounded corners. The bodies of the containers may either be cornered or round in cross-section. The flanges **14** of the container bodies, to which the covers are fixed engage opposed grooves **5** of the two walls **1**. The containers are secured in position by the flanges **8** of the holder towards the bottom and by the cams **7** towards the top.

If a container is to be brought into the holder the container flange **14** is supported from the top onto the upper side of opposed cams **7** and then pressure is applied to the containers from the top. Due to the elastically yieldable ad tensible yokes **2** the walls are forced away from each other until the flanges **14** of the downwardly moved container lies entirely beneath the cams **7**, whereupon the elastically spanned yokes **2** automatically approach the spread walls **1** to each other. On removing a container by applying a pull to its upper flange portion towards the

top the corresponding phenomena occur. However, while spreading the walls 1 from each other on inserting or removing a container, the other containers remain secured in place in the holder since the depth of the grooves 5 is greater than the height of the cams 7.

The holder or support according to the invention may also be used for other containers or the like than those for watch parts.

While I have shown and described only one embodiment of my invention I do not wish to restrict the scope of protection thereto, but to make modifications and rearrangements as may come within the purview of the appended claims.

What is claimed:

1. In a holder for flanged containers, two upright walls at a distance from each other, elastically yieldable yokes connecting the ends of said upright walls near the lower ends of said walls, groove-shaped upright rests on the inner side of said upright walls adapted to receive flanges of containers to be stored, stop means at the lower end of said walls to limit said groove-shaped rests towards the holder bottom, and cam means at the upper ends of said groove-shaped rests, said cam means projecting from the bottom of and into said groove-shaped rests over a part only of the depth of said groove-shaped rests for securing said stored flanged containers against dropping out of the holder.

2. A holder according to claim 1 in which bosses are provided on said upright walls disposed between adjacent groove-shaped rests and projecting from the upper end of said upright walls towards the space between said walls.

3. A holder according to claim 1 in which bosses are provided on said upright walls disposed between adjacent groove-shaped rests and projecting from the upper end of said upright walls towards the space between said walls, teeth are provided on the lower ends of said upright walls, several holders being stackable one upon another, the bosses of one holder engaging between teeth of the adjacent holder.

4. A holder according to claim 1 in which bosses are provided on said upright walls disposed between adjacent groove-shaped rests and projecting from the upper end of said upright walls towards the space between said walls, teeth are provided on the lower ends of said upright walls, several holders being stackable one upon another, the bosses of one holder engaging between teeth of the adjacent holder, said stop means being formed as internal flanges on the lower ends of said upright walls, said teeth being provided on the lower surfaces of said internal flanges.

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DAVID H. BROWN, Primary Examiner

U.S. Cl. X.R.

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