Sept. 30, 1958 A. W. SERIO 2,854,279

SELF-ADJUSTING HANDLE FOR GLASS CONTAINERS

Filed May 24, 1957

FIG.2

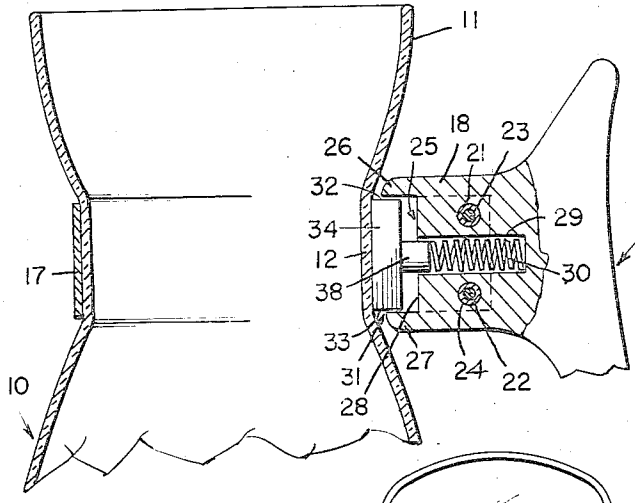
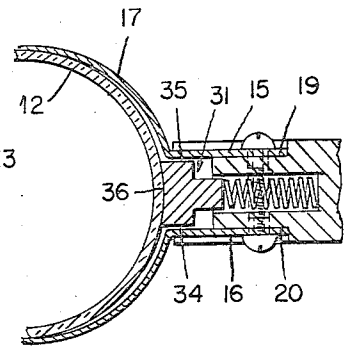


FIG.3



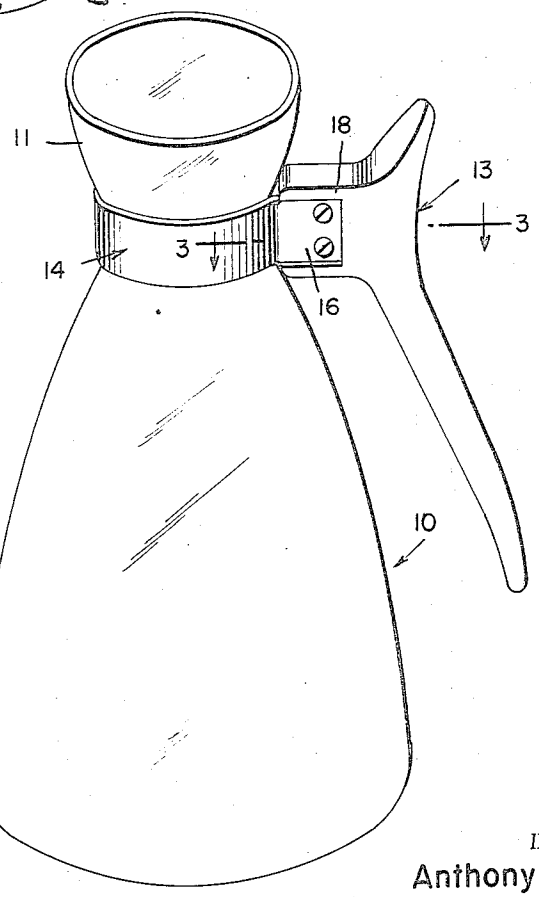


FIG.4

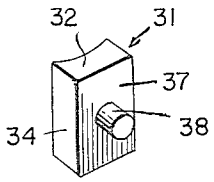


FIG.1

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SELF-ADJUSTING HANDLE FOR GLASS CONTAINERS

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3 Claims. (Cl. 294—27)

This invention relates to a handle and handle retaining assembly particularly adapted for use in conjunction with glass containers.

In the production of glassware, it is difficult to control the precise dimensions thereof and this leads to a particular problem with articles to which a handle assembly is to be attached, particularly if the securing means for the handle assembly is of the encircling band type since it is required that a reasonable degree of snugness be attained between the neck of the glass article and the retaining band. Therefore, when a band-like retainer is used, the band must be custom fitted to the individual glass article or some means must be provided to assure that a standard band will suffice for attachment to all of the glass articles within the dimensional tolerances allowed by the production run.

It is, therefore, a primary object of this invention to provide an improved handle and retaining band assembly which is of a self adjusting nature so as to accommodate for discrepancies in glassware sizes within the limits of production tolerances.

Another object of this invention is to provide an improved handle and retaining assembly of the character described wherein an elongate strip of flexible metallic material is utilized as the attaching band with the opposite ends of the band being attached to the handle member and wherein means is interposed between the handle member and acting in abutment against the associated glassware to tension the band and snugly hold the same in engagement with the article so that the handle is held upon the article with a reasonable degree of rigidity.

Still another object of this invention is to provide an assembly of the character described wherein the handle is so constructed as to receive a spring element and a guide portion of a tensioning block element, which block element is substantially co-extensive in width with the width of the retaining band and wherein the construction of the handle is such as to retain the tensioning block in proper position relative thereto and between the opposite end portions of the band which are attached to the handle member on opposite sides of the block.

A further object of this invention is to provide an improved handle and retaining assembly of the self-adjusting type wherein a portion of the handle is so formed as to snugly receive opposite end portions of the encircling band and wherein the handle portion is so characterized by being so formed as to guidably hold the tensioning block so as to minimize rocking or any relative motion thereof with respect to the handle member.

With the above and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawing and pointed out in the claims hereto appended, it being understood that various changes in the form, proportions, and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:

Fig. 1 is a perspective view showing the improved handle and retainer assembly positioned upon an associated receptacle;

Fig. 2 is an enlarged vertical section taken through the handle assembly and showing details of the same;

Fig. 3 is an enlarged horizontal section taken substantially along the plane of section line 3—3 in Fig. 1 and showing further details of the handle and retaining band assembly; and

Fig. 4 is a perspective view of the tensioning block.

Referring at this time more particularly to Fig. 1, a glassware receptacle is indicated generally by the reference character 10 and in this particular instance is provided with a flaring mouth portion 11 and immediately therebelow a substantially cylindrical neck portion 12, see particularly Fig. 2.

In actual production, it is impractical to control the exact outer diameter of the neck portion 12 and it is for this reason that the self-adjusting feature is incorporated in the handle retaining assembly.

The manner in which the handle assembly indicated generally by the reference character 13 is retained on the receptacle 10 is by the utilization of an elongate strip of flexible metallic material 14 which constitutes a receptacle neck encircling band and which has its opposite end portions 15 and 16 rigidly affixed to opposite sides of the handle 13. Consequently, the main body portion 17 of the band is of generally circular form and the opposite end portions 15 and 16 thereof are laterally directed and are disposed in substantially parallel relationship and affixed in straddling relationship to the head portion 18 of the handle assembly. To this end, the opposite side faces of the head portion 18 are recessed as is indicated by the reference characters 19 and 20 in Fig. 3 and the end portions 15 and 16 of the band are received therein such that the outer surfaces thereof are substantially flush with or slightly recessed with respect to the corresponding side surfaces of the head 18. For the purpose of rigidly attaching the band to the handle head 18, the latter is provided with a pair of transverse bores 21 and 22 and received therein are a pair of fastening assemblies 23 and 24 which may take the form of a sleeve type nut and associated bolt as is specifically shown, or the fastening may be effected in any suitable manner.

The forward end of the head portion 18 is provided with a notch 25 defining upper and lower terminal flange portions 26 and 27 and opening upon the central portion of the vertical face 28 of this notch is a horizontally disposed bore 29 which terminates at a point within the head portion of the handle assembly. This bore serves to receive a compression spring member 30 which cooperates with the tensioning block member 31 which effects the self-adjusting action of the retaining assembly.

The tensioning block, as is shown more clearly in Figs. 2, 3 and 4, is provided with substantially parallel upper and lower surfaces 32 and 33 and with flat parallel side surfaces 34 and 35, with the forward face 36 of the block being transversely concave to conform generally to the contour of the neck 12 and with the rear face 37 thereof being substantially flat to permit the same to engage in flush relationship with the forward face 28 within the notch 25.

Centrally disposed with respect to the rear face 37 of the block and projecting rearwardly therefrom is a cylindrical plug element 38 which is adapted to be received substantially snugly within the previously mentioned bore 29 to in part effect a guiding action upon the tensioning block and to bear against the compression spring 30 such that the block, as hereinafter set forth, is properly engaged against the neck 12.

The upper and lower surfaces 32 and 33 of the block

are likewise substantially snugly engaged between the adjacent flat opposed surfaces of the upper and lower flanges 26 and 27 and the opposite side faces 34 and 35 of the block are also closely disposed with respect to the adjacent inner faces of the terminal end portions 15 and 16 of the band 14 so that the construction of the handle head 18 is such as to guidably position the tensioning block with respect thereto and serves in part to conceal the same from view so that the assembly construction, as viewed in Fig. 1, for example, is imparted a pleasing appearance.

The normal length of the compression spring 30 is slightly greater than the depth of the bore 29 so that when the parts are in the position shown, for example in Figs. 2 and 3, the spring will be compressed somewhat so as to urge the tensioning block 31 outwardly into snug and firm engagement with the neck 12 which will place the band 17 under tension and snugly engage the same against the major portion of the outer surface of the neck 12, even though, as is illustrated in Fig. 3, the band is not of the proper length to engage completely with the outer surface of the neck 12.

This will permit the assembly to accommodate for varying sizes of necks and will permit the same length of band material to be utilized in each case without the necessity of hand fitting each band upon the particular neck with which it is to be used.

At the same time, by virtue of the fact that the height of the tensioning block 31 is substantially coextensive with the width of the band, and since the same is well guided by virtue of the construction of the terminal end of the handle head portion 18, the band will be very snugly held in engagement with the neck without any material looseness therebetween and the handle and retainer assembly forming this invention is characterized by its high degree of rigidity with respect to the receptacle.

I claim:

1. A self-adjusting handle and handle retainer assembly adapted to be secured to the neck of an associated receptacle and accommodate for production variations in receptacle neck diameters, comprising an elongate strip of flexible material adapted to grippingly encompass a receptacle neck, a handle having a head portion, said strip having its opposite end portions fixed to opposite side faces of said head portion of the handle, said head portion having a notched surface between said opposite side faces affording upper and lower outwardly projecting flanges, a tensioning block guidably positioned between said upper and lower flanges and sandwiched between said end portions of the strip, said block being freely slidably supported between said flanges and said end portions of the strip for movement toward and away from an associated receptacle, and spring means disposed between and engaging said head portion and said block for normally urging said block outwardly from between said flanges and strip end portions to bear against an associated receptacle neck and retain said strip in tensioned, encircling relation thereto.

2. A self-adjusting handle and handle retainer assembly adapted to be secured to the neck portion of a receptacle and accommodate for variations in receptacle necks due to commercial tolerances, comprising a handle having a head portion adapted to be positioned closely adjacent a receptacle neck, a neck-encircling band of flexible, strip-like material having generally flat, parallel end portions, said head portion having recessed opposite side faces presenting inset, flat, parallel side faces, said end portions of the band being secured to said head portion in face-to-face contact with said side faces, the inner surface of said head portion between said side faces being notched to present upper and lower outwardly projecting flanges having opposed inner faces substantially coplanar with the respective upper and lower edges of said end portions of the strip, the inner surface of said head portion between said flanges being provided with a bore extending inwardly from the central region thereof, a compression spring disposed within said bore, a tensioning block positioned between said flanges and having upper and lower faces guidably engaged between the inner faces of said upper and lower flanges, said block also having parallel side faces guidably engaged between opposed inner surface portions of said strip end portions, and there being a cylindrical projection rigid with the block and extending into said bore and bearing against said spring, said block having a transversely concave outer face co-extensive in height to the width of said band adapted to bear against a receptacle neck and maintain said band tensioned therearound.

3. The assembly as defined in claim 2 wherein said head portion of the handle is provided with a pair of vertically spaced transverse bores positioned respectively above and below the first mentioned bore and at right angles thereto, said end portions of the band being provided with aligned apertures mating with said pair of bores, and fastening elements projecting through said apertures and a pair of bores to fix said end portions of the band to the handle.

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