

C. G. OVERMYER.
ANNEALING RING.
APPLICATION FILED FEB. 20, 1909.

958,674.

Patented May 17, 1910.

Fig. 2.

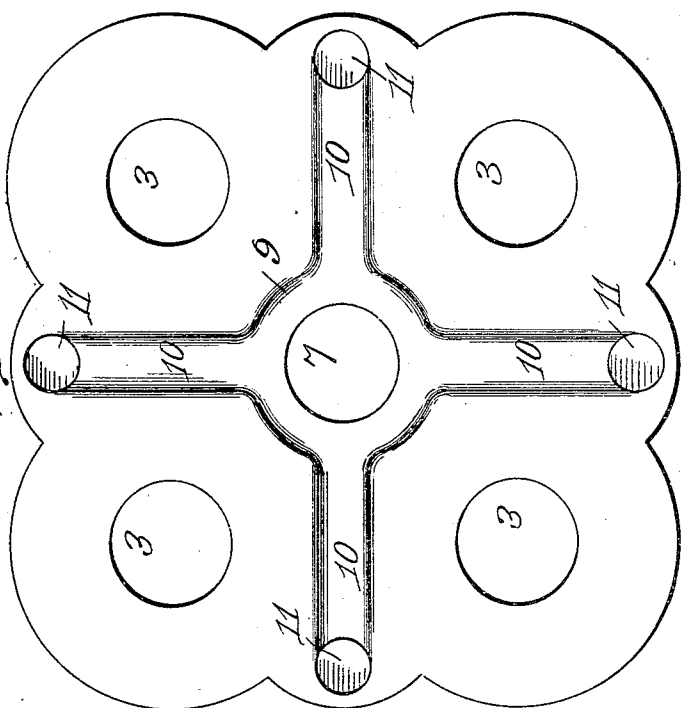
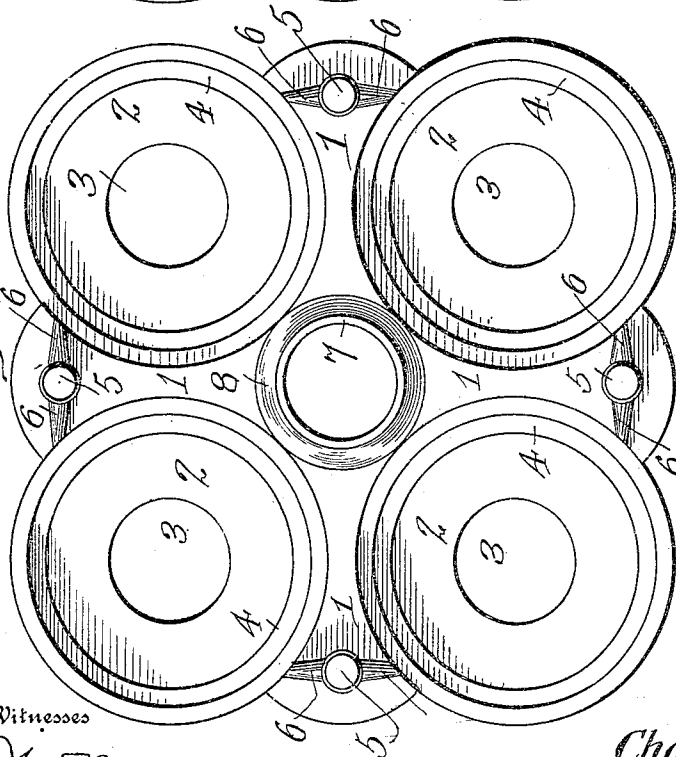


Fig. 1.



Witnesses

J. W. Jones
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Fig. 4.

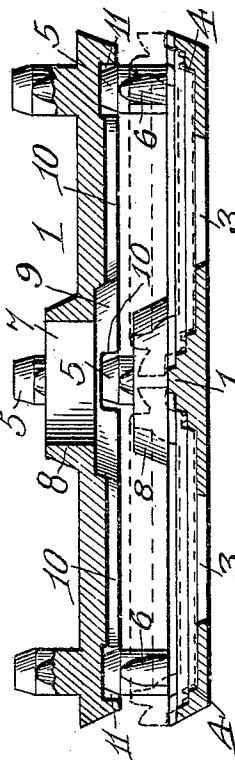
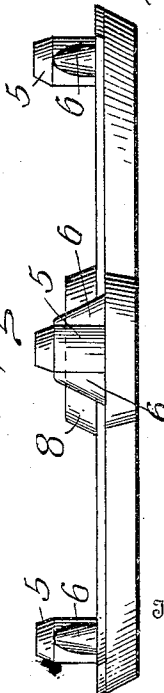


Fig. 3.



Inventor

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UNITED STATES PATENT OFFICE.

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ANNEALING-RING.

958,674.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES G. OVERMYER, a citizen of the United States, residing at Coffeyville, in the county of Montgomery and State of Kansas, have invented certain new and useful Improvements in Annealing-Rings, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to that class of rings, series of rings, or crates used to convey glass ware, while in a partially molten, or plastic state, from the molds or presses through the annealing process to the receptacle for the finished product.

The object of this invention is to provide simple means for preserving molded or pressed glass ware in a desirable shape without injurious pressure during the treatment or conveyance from one point to another and whereby the glass may be shielded and prevented from being brought into contact with foreign objects, or in contact with each other when a plurality are simultaneously transported in a pliable condition and subsequent to the annealing or hardening operation.

The invention consists essentially of a ring, or a series of rings, particularly adaptable as to the number, form, or shape and size for use as a receptacle and conveyer for glass lids immediately after they come out of the mold or press and having such structural accessories as to furnish a reliable and positive support for the edges of the lids and prevent warping, or twisting of any portion of the latter, but more especially to prevent warping, or bending of the edges of the lids, during the various processes through which such lids pass between the molding and pressing operation, and the receptacle for the finished article.

The supporting structure, or base of the rings may be of any preferred shape, or design, similar to or different from the contour illustrated in the accompanying drawing, any metal or combination of metals may be used, which possess the requirements of sustaining, or resisting injury by the heat, or gases to which they may be subjected during the process of annealing. The series of rings are also adapted to be stacked up in layers in any number while loaded and transported from place to place.

In the drawings: Figure 1 is a top plan

view of one of the rings. Fig. 2 is a bottom plan view of the same. Fig. 3 is a side elevation of one of the rings, and Fig. 4 is a sectional view of two of the rings, one ring shown upon the other, the section taken through the ring receiving sockets in the bottom ring and through the center of the other ring.

Referring to the drawings by numerals, 1 designates a web, or base, which is provided with a plurality of sockets 2, in which are adapted to be carried lids as hereinbefore stated, and while four of said sockets are illustrated at present, it should be understood that any number may be used without departing from the scope of the invention, the essential feature being the provision of means for supporting more than one lid or analogous article of glass. The sockets 2 are provided with apertures 3 formed in the center thereof, which not only lightens the device, but also allows a good circulation around the lid, or jar cap, which is adapted to be positioned in said socket. Around the edge of the socket is formed a plurality of raised ledge-portions 4, more clearly shown in Fig. 4 of the drawing. These ledges are so formed as to receive the edges of the caps, or lids and firmly hold the same in the sockets. Of course, it will be understood that the sockets could be made any shape to fit the kind, or style of lid to be conveyed. The ledges in the structure illustrated form a substantially step structure, and these ledges support the edges of the lids and prevent the warping of the same as hereinbefore described. It will be obvious that by having the sockets provided with bottoms and an aperture formed near the center thereof that the body of the lid or plate, which is adapted to be positioned within the socket will be prevented from sinking, if the same should happen, and falling from the sockets.

At points intersecting the outer portion of the sockets are formed upwardly tapering posts 5, having laterally extending flanges 6, and at the center of the base is an opening 7 surrounded by an upwardly tapering retaining or guard flange 8. By having the posts provided with laterally-extending flanges positioned between the sockets and the flange 8 formed around the central aperture, it will be obvious that the flanges will act as a guide to direct the lids or articles

within the sockets for the reason that when an article is being placed in the socket, and should happen not to exactly engage the ledges 4, the article will be brought into engagement with the flange 6, which for the reason that they taper will direct the lid into the socket, and thereby allow the lid to be firmly held therein. It will be further obvious that the flange 8 will also direct the articles into the sockets. The under side of the base 1 is provided with a hollowed out portion 9 surrounding the aperture 7, and said hollowed out portion is provided with laterally extending channels 10, extending therefrom toward the sides of the rings. These channels 10 terminate at their outer ends in sockets 11, which sockets are adapted to receive the upper ends of the posts 5. These channels like the apertures 3 not only tend to decrease the weight of the device, but also allow free circulation of hot air currents, or gases, therein and facilitate the stacking of one ring upon the other as will be hereinafter explained.

Glass lids corresponding in number to the sockets 2 of the rings are placed in the sockets 2 and the rings placed upon one another, the posts 5 fitting in the sockets 11, and a rod or suitable carrying means may be passed through the central aperture 7 of the rings, and thereby convey any number of the same from one place to another and also preventing the lateral displacement of the same. The outer edge of the rings will be securely held upon the ledges in the sockets and the same will be kept from warping. When a number of the devices are stacked, as shown in Fig. 4, the posts 5 project into the sockets 11 formed at the ends of the channels 10, and hold the several devices against sliding movement. These posts 5 are long enough to support the bottom or under side of one device far enough above the next lower device to allow for the maximum vertical extent of the lids between the devices and thereby avoid contact with, or pressure on said lids, during their molten or semi-molten condition. When a plurality of these devices are stacked the central openings 7 will coincide, and a suitable carrying means may be inserted through said openings and not only conveniently serve to stack the devices, but also to hold the latter in firm vertically assembled condition. The device in either of its forms will be found exceptionally convenient for the purpose for which it has been devised and will be a valuable improvement in the art of glass annealing or glass treatment generally.

It should be understood as previously stated that in its prior aspect this invention comprehends the employment, not only of the various means described, but of equivalent means for performing the recited functions. While the arrangement shown, is

thought, at the present time to be preferable, it is desired to reserve the right to perfect such rights and modifications thereof as may come fairly within the scope of the appended claims.

What I claim is:

1. A device of the class described for carrying molten glass articles during treatment comprising a body provided with a plurality of sockets, each socket having an apertured center, said body provided with a central opening, an upwardly-projecting flange formed upon said body and adapted to reinforce the same, upwardly-projecting lugs formed upon said body intermediate said sockets, said body provided with grooves formed upon the bottom thereof terminating in lug-receiving sockets at their outer ends, and the central opening of said device adapted to receive a carrying rod for facilitating the handling thereof.

2. A device of the class described comprising a plurality of plates provided with registering apertures at the centers thereof, each plate provided with an upwardly-extending guiding flange surrounding the central aperture, guiding means formed upon said plates and adapted to hold the same in a spaced-apart relation, and said central apertures adapted to receive carrying means for facilitating the carrying of said plates from place to place and preventing the lateral displacement of the same.

3. A device of the class described comprising a body provided with a plurality of sockets adapted to carry partly molten or plastic glass articles during treatment, said body provided with a central aperture, formed between said sockets, upwardly-projecting lugs formed upon said body intermediate said sockets, laterally-extending flanges formed upon said lugs and body and extending to said sockets and adapted to reinforce said lugs and body, and said central aperture adapted to receive a carrying member for facilitating the carrying of said body from place to place.

4. A device of the class described comprising a body provided with a plurality of sockets, each of said sockets being provided with an aperture, a ledge formed around the inner edge of each of said sockets and adapted to support a glass article from the bottom of said socket for allowing the free circulation of air around the same, spacing means formed upon said body and adapted to support a duplicate device just above said body, said body provided with a central aperture adapted to receive a carrying member for facilitating the conveyance of said bodies from place to place and preventing the lateral displacement of the same.

5. In a device of the class described the combination with a plurality of plates, said plates provided with central apertures and

with article receiving sockets, guiding and spacing means formed upon said plates and adapted to direct articles into the sockets, said plates adapted to be placed in a stacked relation upon each other and be held in a spaced-apart relation by means of said spacing means, and said central apertures adapted to receive a carrying member for facilitating the conveyance of said device from place to place and preventing the lateral displacement of said device from each other while being carried.

6. A device of the class described comprising a body provided with a plurality of sockets and a central aperture, guiding means formed around said aperture and between said sockets and adapted to direct an article into either one of said sockets when being placed upon said body.

7. A device of the class described comprising a body provided with a plurality of sockets and a central aperture, a flange formed upon said body around said central aperture and extending from said sockets to said central aperture, posts formed upon said body and positioned intermediate the outer edges of said sockets, flanges formed upon each side of said posts and extending to said sockets, said flanges upon said posts and flange around said central aperture being adapted to direct an article into a socket when placed upon said body.

8. A device of the class described comprising a body provided with a plurality of sockets and a central aperture, a tapering flange formed around said aperture and extending from all of said sockets to said central aperture, posts formed intermediate the outer edges of said sockets, flanges formed upon each side of said posts and tapering from the top of said posts to the sides of said sockets, and said tapering flanges upon

said posts and around said central aperture being adapted to direct an article into one of said sockets when being placed upon said body.

9. A device of the class described comprising a body provided with article-receiving means, said body provided with means extending above said article-receiving means and being adapted to direct an article into engagement with said article-receiving means.

10. A device of the class described comprising a body provided with a plurality of article-receiving sockets, said body provided with spaced means formed at different points and positioned contiguous to the sockets for facilitating the directing of partly molten or plastic articles into said sockets.

11. A device of the class described comprising a body provided with a plurality of article-receiving sockets, and means between each two contiguous sockets for directing an article into either of said sockets.

12. A device of the class described comprising a body provided with a plurality of sockets, and means formed at the center of the body and adjacent to the sockets for directing an article into either of the sockets.

13. A device of the class described comprising a body provided with a series of article-receiving sockets, and means between each two contiguous sockets for directing an article into either of the sockets and holding a body in spaced relation relative to the next body when stacked.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CHARLES G. OVERMYER.

Witnesses:

GEO. F. COLLINS,
LOLA STEPHENSON.