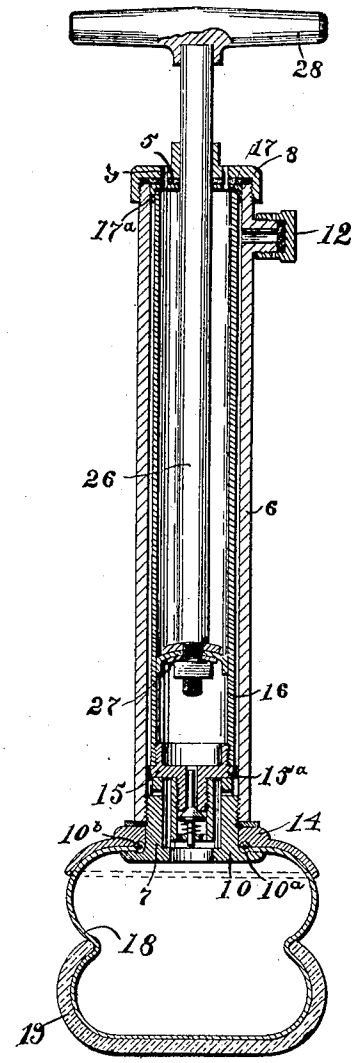
No. 881,915. PATENTED MAR. 17, 1908.

F. G. FARNHAM.

METHOD OF PROTECTING THE INSIDE OF VESSELS DURING ORNAMENTATION.

APPLICATION FILED JAN. 16, 1907.



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METHOD OF PROTECTING THE INSIDE OF VESSELS DURING ORNAMENTATION.

No. 881,915. Specification of Letters Patent. Patented March 17, 1908.

Application filed January 16, 1907. Serial No. 352,660.

To all whom it may concern:

Be it known that I, FRANK GUNN FARNHAM, citizen of the United States, residing at Honesdale, Pennsylvania, have invented certain new and useful Improvements in a Method of Protecting the Inside of Vessels During Ornamentation, of which the following is a specification.

My said invention relates to improvements in the method of protecting the inside of glass articles during the process of ornamentation.

In this class of work great difficulty has been experienced in protecting the interior of the articles while their exterior surfaces are being cut, etched, frosted, and particularly is this true where cut glass articles are dipped in a bath of hydro fluoric acid, the contact of which with the interior surface of the glass will pit the same.

I have aimed to overcome these difficulties by the present invention, which consists broadly in placing a collapsed bag within the vessel and then inflating the bag until it completely closes the vessel at the edge and the union between the bag and vessel becomes air tight.

An embodiment of suitable means for conveniently carrying out my improved method is shown in the accompanying drawing in which the figure represents a central vertical sectional view.

Referring by reference characters to this drawing the ordinal 6 designates a cylinder of any suitable acid proof or acid resisting material which is provided with a removable tubular plug 7 threaded into its lower end and a removable cap 8 threaded upon the upper end. Within this cylinder is removably located an inflating tube which is in the form of a barrel 16 of an air pump, the lower end of which is closed by the valve carrying part 15, hereinafter more fully described, while the upper part carries a removable cap 17. The exterior diameter of the pump barrel is less than the interior diameter of the cylinder 6 so as to leave an annular space, and the pump barrel is centered in the cylinder by the depending annular flange 17^a of the cap at the top and the laterally extending flange 15^a of the part 15. Within the pump barrel works a piston rod 26 carrying a suitable pump piston 27 at one end and having a suitable operating handle 28. Air is admitted to the pump barrel through alining openings 9 in the caps 8 and 17. I prefer to place a packing disk 5 between the caps 8 and 17 as shown, which will of course be provided with corresponding openings. The openings in the cap provide means by which a spanner may be used to unscrew the cap when the pump barrel is to be removed.

The valve plug or member is provided at its lower end with an annular flange 10 having an annular groove 10^a in its upper face. A washer 14 encircles this member between flange 10 and the lower end of the cylinder 6, and this washer has a corresponding, but oppositely located, groove 10^b.

At 18 is shown an inflatable bag or body, preferably of rubber having a thickened or beaded edge designed to be clamped in the grooves and between the flange. It will be understood that this bag is designed to be placed within the cut glass article to be ornamented and air forced into it by the air pump to cause it to be expanded within and securely hold the glass article, the glass article thus held being indicated at 19. When thus expanded the air will be held therein by the check valve, and the bag will completely close the vessel at the edge and the union between the bag and vessel will be air tight. While thus held on the bag the vessel or glass article may be subjected to ornamenting or dipping in acid, without any danger of any injurious substance coming in contact with the interior thereof, and during this time the air forcing device or pump serves as a convenient manipulating member.

When through with an article the release of the air permits the removal of the bag from the article and its insertion in a fresh one when the operation would be repeated.

It will be understood of course, that bags of various shapes may be provided and also that any suitable means may be used for inflating the bag.

Having thus described my invention, what I claim is:

1. The method of protecting the inside of vessels during the process of ornamentation which consists in placing a collapsible bag within a vessel and then inflating the bag until the bag is forced into tight contact with the vessel within its mouth and the union between the vessel and bag at the mouth of the vessel is hermetically closed, and retaining the pressure within the bag during the process of ornamentation, substantially as described.

2. The method for protecting the inside of

vessels during the process of ornamentation which consists in placing a collapsible bag within a vessel and then inflating the bag until the bag becomes tense and completely closes the vessel and extends over and covers the upper edge of the vessel, and the union between the bag and the vessel becomes air-tight so that the bag is held to the inside wall and the upper edge of the vessel by atmospheric pressure, and retaining the pressure within the bag during the process of ornamentation.

3. The method for protecting the inside of vessels during the process of ornamentation which consists in placing a collapsible bag having an inflating tube and valve within a vessel and then inflating the bag until the bag becomes tense and completely closes the vessel and extends over and covers the upper edge of the vessel, and the union between the bag and the vessel becomes air-tight so that the bag is held to the inside wall and the upper edge of the vessel by atmospheric pressure and retaining the pressure within the bag during the process of ornamentation by closing the valve and suspending the vessel by the neck of the inflating tube.

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

FRANK GUNN FARNHAM.

Witnesses:
N. C. FARNHAM,
ROBT. A. SMITH.