

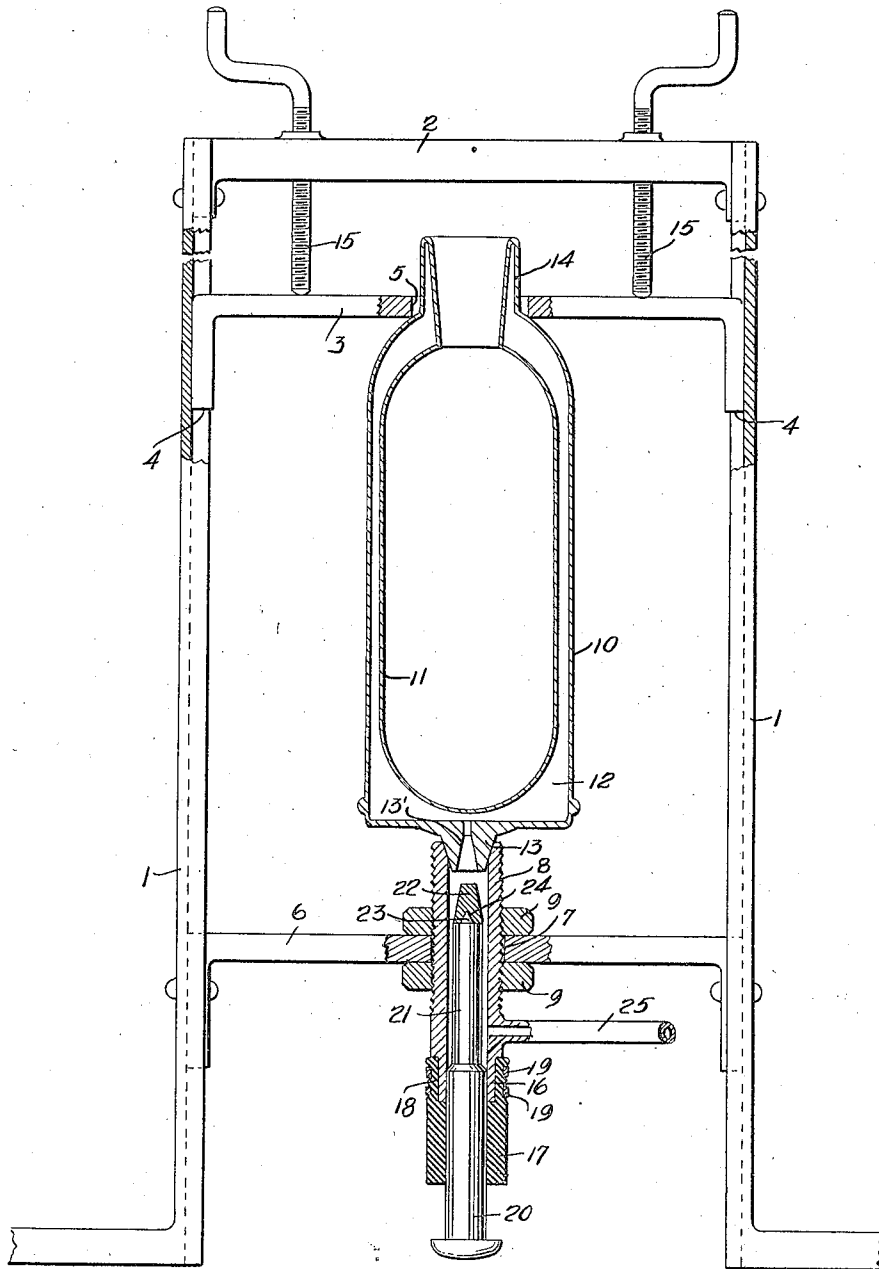
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HEAT AND COLD INSULATING RECEPTACLE AND APPARATUS FOR SUPPORTING AND FINISHING THE SAME

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WITNESSES

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HEAT AND COLD INSULATING RECEPTACLE AND APPARATUS FOR SUPPORTING AND FINISHING THE SAME.

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To all whom it may concern:

Be it known that I, JOHN EDWARD HITCH, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Heat and Cold Insulating Receptacle and Apparatus for Supporting and Finishing the Same, of which the following is a full, clear, and exact description.

This invention relates to improvements in that type of receptacle commonly known as a thermos bottle and in an apparatus for supporting and finishing the same.

An object of the invention is to provide a bottle of this character in which the vacuum chamber is sealed in a novel manner; to provide improved means for sealing the chamber and for supporting a bottle during the sealing operation.

A still further object is to provide an apparatus of this character, which will be simple and practical in construction, durable and efficient in use, and comparatively inexpensive to manufacture.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings:—

The figure is a view partly in side elevation, but mainly in longitudinal section through my improved apparatus illustrating a bottle supported thereon.

Referring in detail to the drawings, 1 represents an upright frame and 2 a cross beam connecting the vertical frame members at their upper ends. A cross head 3 is mounted to slide vertically in the frame, as indicated at 4. This cross head is provided with a centrally disposed opening 5 for a purpose which will hereinafter appear.

A platform 6 is rigidly secured to the lower end of the frame 1 and is provided with a central opening 7. An externally screw threaded vertically disposed metal tube 8 is located in the opening 7 and is locked in position by a pair of lock nuts 9 located on opposite sides of the platform.

I have illustrated a double-walled receptacle in the form of a bottle which comprises an outer shell 10 and an inner shell 11. The inner shell serves as a container. The inner shell is integrally connected to the outer

shell 10 only at the mouth of the bottle so that an air chamber 12 is provided between the inner and outer shells.

At its lower end, the outer shell is provided with a depending tapered extension 13, and formed with a tapered air passage 13' adapted to seat in the upper end of the tube 8. The neck 14 of the bottle is accommodated in the opening 5 of the cross head 3 and adjusting screws 15 mounted in the cross beam 2 serve to clamp the sliding cross head 3 against the shoulder of the bottle and hold it firmly in position.

The sleeve 8 at its lower end includes a reduced portion 16. A rubber sleeve 17 is formed with an enlarged bore 18 at one end receiving the reduced portion 16 of the sleeve 8. Elastic bands 19 serve to tightly couple the two sleeves.

A driver bar 20 frictionally fits within the sleeve 17 and includes a reduced upper end 21 located in the sleeve 8. A tapered plug 22 is supported upon the upper end of the driver bar 20, the driver bar preferably being formed with a fit 23 which fits within a conical recess 24 in the plug.

An air pipe line or air hose 25 communicates with the sleeve 8 and any suitable air pump (not shown) may be connected to the air line 25.

The manner of use of the apparatus is as follows:

After the bottle has been locked in place by the cross head 3, the pump is operated to suck the air from the air chamber 12. The reduced portion 21 of the driver bar permits a free circulation of air from the chamber 12 through the tube 8 and pipe line 25. The rubber sleeve 17 effectively prevents entrance of air into the tube 8 while air is being pumped from the chamber 12. After the partial vacuum has been created in the chamber 12, the driver bar 20 is struck with any suitable tool to drive the plug 22 into the tapered air passage 13' and seal the chamber 12. The bottle may then be removed from the support and a drop of solder applied around the plug to further seal the chamber.

Although I have illustrated one of the preferred embodiments of my invention, it will be apparent that various slight changes and alterations might be made in the general form and arrangement of the part described without departing from the

invention and hence I do not wish to limit myself to the precise details set forth, but shall consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of the appended claims.

It might be noted that the plug 22 could be provided with a screw threaded socket receiving a threaded post on the driver bar 20 and after the plug had been driven home, the driver bar might be unscrewed therefrom.

I claim:

1. An apparatus of the character described, comprising a frame having a platform and provided with an adjustable cross head having an opening to receive the neck of a vessel, a tubular member mounted in the platform, said member forming a seat for the vessel and having means for connecting it with an air pump, and a driver bar in the tubular member and adapted to carry a plug for closing the vessel.

2. An apparatus of the character described, comprising a frame having a platform, and provided with a vertically adjustable cross head having an opening to receive the neck of a bottle, a tubular member vertically adjustable in the platform and having means for connecting it with an air pump, said member being adapted to receive a tapering and apertured extension on the vessel, and a driver bar adapted to carry a plug to be forced into the said extension to close the receptacle.

3. In an apparatus of the character described, a frame having a platform and provided with an adjustable cross head having an opening to receive the neck of a bottle, a tubular member mounted in the platform

and upon which the vessel from which air is to be exhausted is adapted to be supported and held by the cross head, said member having means for connecting it with an air pump, a slidable driver bar mounted in the tubular member and adapted to carry a plug for closing the vessel supported upon said member, and means whereby the end of the tubular member is rendered air tight.

4. In an apparatus of the class described, a frame, a platform carried by the frame, a vertical tubular bottle supporting member rigidly mounted in the platform and including a reduced lower end, a sleeve of resilient material having an enlarged bore adjacent one end receiving the reduced end of said tubular member, a driver bar normally held against movement by the resiliency of the sleeve and including a reduced end located in said tubular member and carrying a plug for closing an aperture in the bottle.

5. In an apparatus of the class described, a frame, a platform carried by the frame, a vertical tubular bottle supporting member rigidly mounted in the platform and including a reduced lower end, an adjustable cross head for holding a bottle on the tubular member, a sleeve of resilient material having an enlarged bore adjacent one end receiving the reduced end of said tubular member, a driver bar normally held against movement by the resiliency of the sleeve and including a reduced end located in said tubular member, and means carried by the driver bar for supporting a plug adapted to be driven into the lower end of a bottle supported by said tubular member.

JOHN EDWARD HITCH.