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G. FERRY

2,072,630

SPECIMEN CONTAINER

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Fig. 1.

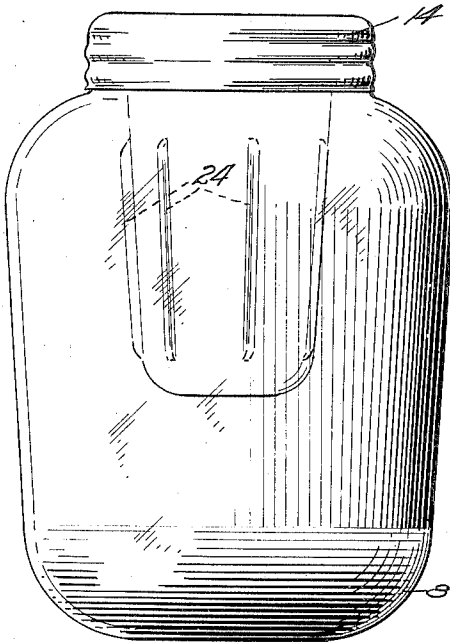


Fig. 2.

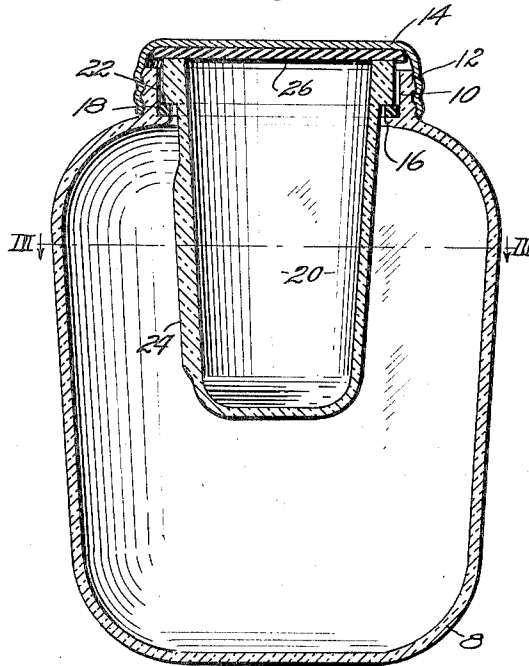


Fig. 3.

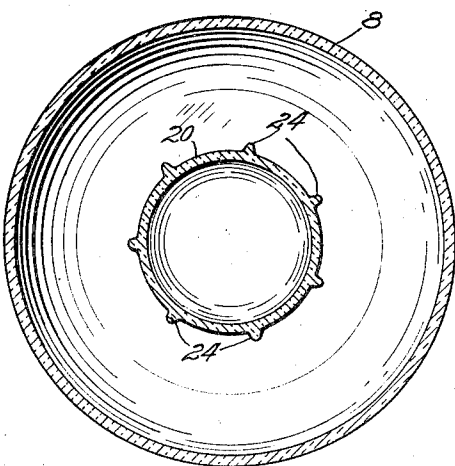


Fig. 4.

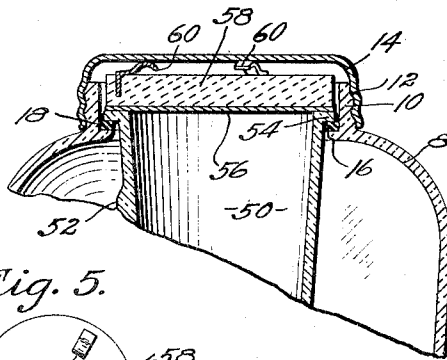
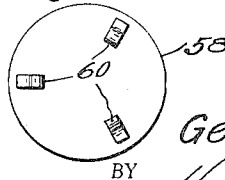


Fig. 5.



INVENTOR.

Genevra Ferry

BY

Howey & Hamilton,

ATTORNEYS.

UNITED STATES PATENT OFFICE

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SPECIMEN CONTAINER

Genevra Ferry, Nevada, Mo.

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3 Claims. (Cl. 215—6)

This invention relates to laboratory equipment in the nature of a specimen container, wherein is embodied structure for maintaining specimens at the desired predetermined temperature during time of transporting the specimen from patient to laboratory and the primary object of this invention is to provide efficient, unique and desirable means that will be simple to construct, easy to handle, and efficient in operation.

Another object of this invention is to provide a specimen container, having an inner and an outer holder for specimen and heating medium respectively, which holders are uniquely and specially formed so that the heating medium and specimen are both sealed in place for safe and easy transportation.

Further objects of the invention will appear during the course of the following specification, referring to the accompanying drawing, wherein a preferred and one modified form of the invention are illustrated, and wherein:

Figure 1 is a side elevation of a specimen container made to embody this invention.

Fig. 2 is a vertical, central section through the same.

Fig. 3 is a cross section through the container, taken on line III—III of Fig. 2.

Fig. 4 is a fragmentary, detailed, sectional view through the upper portion of a container embodying a modified form of the invention, and,

Fig. 5 is a top plan view of the lid employed in the modified form.

In the preferred embodiment of the invention illustrated, a vessel 8 of substantially the form illustrated is provided and made of glass or other suitable substance. Vessel 8 is provided with a neck 10, having external screw threads 12 created thereon so that a removable cover 14 may be placed in conventional fashion. A continuous, internal, annular shoulder 16 is formed around the inner surface of vessel 8 adjacent the lower edge of neck 10 and a gasket 18 of resilient material is placed upon this internal shoulder for the purpose hereinafter specified. Lid 14 may be formed of metal or other suitable substance and the top thereof should be left smooth for the purpose of receiving identifying indicia such as the patient's name, number, or other information.

An inner receptacle 20, formed of glass or some material that may be sterilized, and made of a size so that it will pass into vessel 8 in substantially the way shown in Figs. 1 to 3 inclusive, has an external, annular shoulder 22 formed thereon which rests upon gasket 18 when the parts

previously mentioned are assembled. This shoulder 22 is continuous and when the parts are in the operative position, the joint at gasket 18 is tight to prevent escape of water or other heating medium that is contained within vessel 8.

A series of ribs 24 are formed integrally with receptacle 20 and arranged around the outer surface thereof so that the area of said outer surface is appreciably increased. Increasing this area permits greater heat transfer from the heat medium employed and thereby the specimen within receptacle 20 is kept at the temperature desired.

A lid 26 extends across the opening into receptacle 20 to seal the same and this lid is preferably resilient so that as cover 14 is moved to position, yielding on the part of lid 26 will take place and the pressure will be equalized and transmitted to gasket 18. It is notable that the distance between shoulder 22 and the top of lid 26 is greater than the distance from shoulder 16 to the upper edge of neck 10. It is also to be noted that the opening into vessel 8 that is outlined by shoulder 16 is great enough to permit introduction of receptacle 20 into vessel 8.

The diameter of that portion of receptacle 20 which lies within neck 10 is less than the inner diameter of said neck and this relationship between parts insures that no binding of the rigid members can take place and that the resilient lid and gasket 26 and 18 respectively will positively absorb irregularities or the like. In so constructing receptacle and vessel 20 and 8 respectively it will be observed that receptacle 20 is positively supported by shock-absorbing members and breakage is unlikely.

In the illustrated embodiment of the invention shown in Figs. 4 and 5, the construction of vessel 8 and parts 10, 12, 14, 16 and 18 is precisely the same as the construction employed in the form illustrated in Figs. 1, 2 and 3. Receptacle 50 in this particular form also has ribs 52 thereon and the outwardly extending, continuous, annular flange 54 presents the shoulder which engages gasket 18. A sheet of non-absorbent material 56 is placed across the upper edge of receptacle 50 before lid 58 is moved to position and when cover 14 is screwthreaded to place, spring tongues 60 will serve as yielding contacts for the purpose of closing and supporting the inner receptacle 50 in the advantageous manner previously set down. These spring tongues 60 are arched as illustrated to allow unrestricted rotation of cover 14 when moving the same to or from the closing position.

In use, water or other heated material is placed

in vessel 8 and heat conducted therefrom through the walls of receptacle 20 to the specimen contained therein. The construction of parts 18 and 26 in the preferred form and 18 and 58 in the modified form is such that heat is not conducted from the wall of receptacle 20 to any heat conducting member which would serve to dissipate the heat and thereby render the device impractical. Spacing the wall of inner receptacle 20 or 50 as the case may be, from the wall of vessel 8 either through the use of such insulating materials as described or by creating an air space therebetween, assists in carrying out this important feature of the invention.

15 The operation, use and advantages of a specimen container made in accordance with this invention have been made obvious in the foregoing specification, and while the container may be specifically altered, it is understood that novelty of the invention is set down in the following claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

25 1. A specimen container comprising a vessel; a cover removably associated with the vessel; an internal shoulder formed on the vessel; a receptacle having an external shoulder thereon for engaging the internal shoulder of the vessel when the receptacle is within the vessel; and a resilient lid for the receptacle, said lid for the receptacle

being compressed by the cover for the vessel as the latter is moved to the completely closed position, said cover and lid being in superimposed relation when in the vessel and receptacle closing positions.

5 2. A specimen container comprising a vessel; a cover removably associated with the vessel; an internal shoulder formed on the vessel; a receptacle having an external shoulder thereon for engaging the internal shoulder of the vessel when the receptacle is within the vessel; a lid for the receptacle secured in place by pressure exerted thereon by the cover for the vessel; and a plurality of ribs formed on the outer surface of the said receptacle whereby to increase the surface area thereof. 15

3. A specimen container comprising a vessel having a neck forming a mouth for the vessel; a continuous, annular, internal shoulder provided on the neck below the outer edge thereof; a gasket on the said shoulder; a receptacle within the vessel having a continuous shoulder and a plurality of ribs formed on the outer surface thereof, said last mentioned shoulder resting on the said gasket; and a compressible lid for the receptacle engageable by the said cover as the latter is moved to the closed position, the portion of the receptacle above its shoulder and said cover, when combined, being of sufficient height to extend above the outer edge of the neck of said vessel. 25 30

GENEVRA FERRY.