United States Patent [19]

Romero-Sierra et al.

[11] **3,792,854**

[45] **Feb. 19, 1974**

[54] **BRAIN BIOLOGICAL SPECIMEN POST MORTEM INSPECTION AND PRESERVING VESSEL**

[75] Inventors: **Cesar Aurelio Romero-Sierra,** Bath, Ontario; **Lionel Caron,** Hull, Quebec; **Gerard Beaudry,** Gatineau, Quebec, all of Canada

[73] Assignee: **Canadian Patents and Development Limited,** Ottawa Province of Ontario, Canada

[22] Filed: **May 18, 1972**

[21] Appl. No.: **254,359**

[52] **U.S. Cl.** **269/328,** 35/17, 35/20, 269/54.4

[51] **Int. Cl.** **G09b 23/28,** B25b 11/00

[58] **Field of Search** ... 269/328, 54.4, 289, 53, 54.5; 35/17, 20

[56] **References Cited**

UNITED STATES PATENTS

774,420	11/1904	Greenman et al.	35/20
190,688	5/1877	Mathewson	269/54.5 X
681,400	8/1901	McCarty	35/20
786,546	4/1905	Chamberlin	269/54.4
2,880,856	4/1959	Albrecht	206/1
2,924,330	2/1960	Ballard	269/54.5 X
3,433,105	3/1969	Barickman	269/54.5 X

FOREIGN PATENTS OR APPLICATIONS

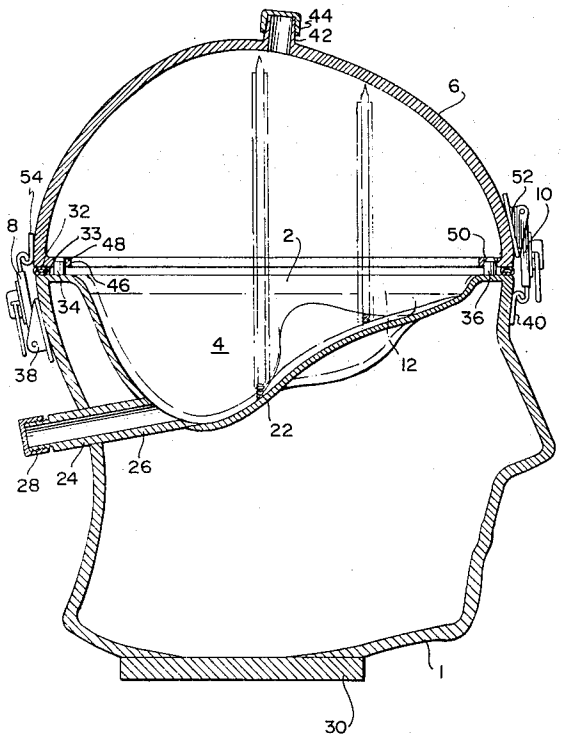
652,028	1948	Great Britain	269/54.5

Primary Examiner—Harold D. Whitehead
Assistant Examiner—J. T. Zatarga
Attorney, Agent, or Firm—Francis W. Lemon

[57] **ABSTRACT**

A brain biological specimen post mortem inspection and preserving vessel, a transparent container shaped to cradle the brain and provided with an open top forming an examination opening, for example, for dissection, a lid sealing the open top, and clasps for clamping the lid to the container. The brain is preferably mounted on sleeves on pins on a removable insert in the container, and the lid and container preferably each provided with a capped preserving fluid inlet and drain respectively.

2 Claims, 4 Drawing Figures



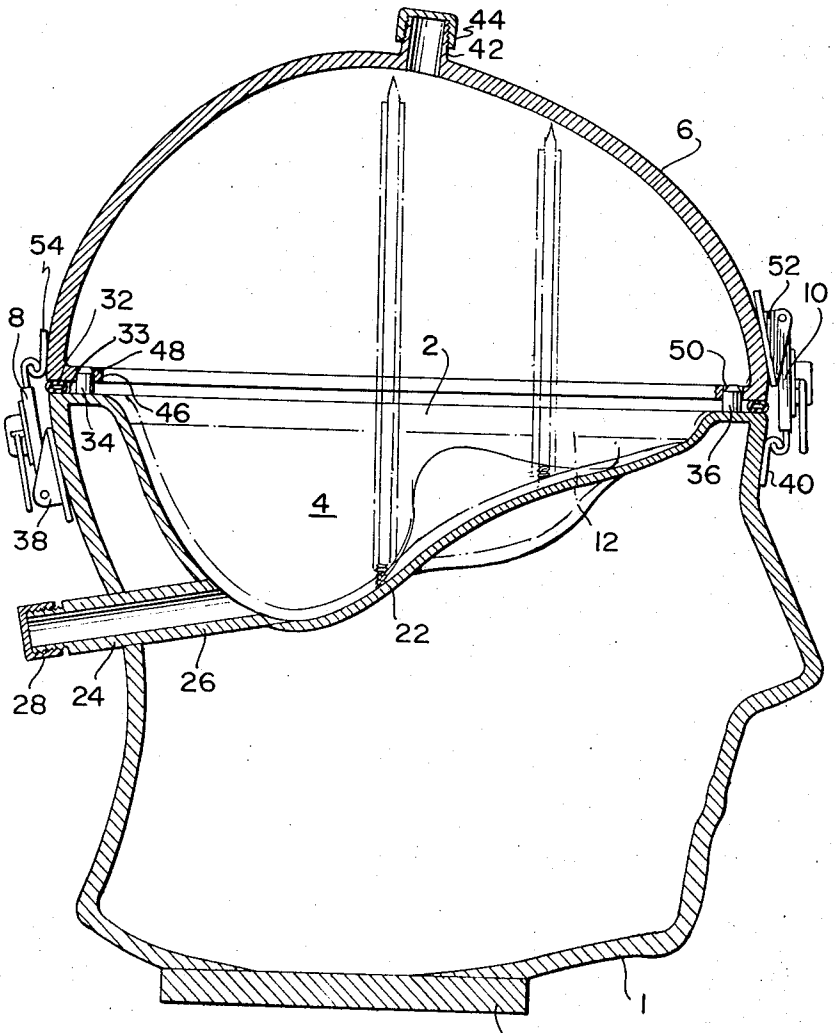


FIG. 1.

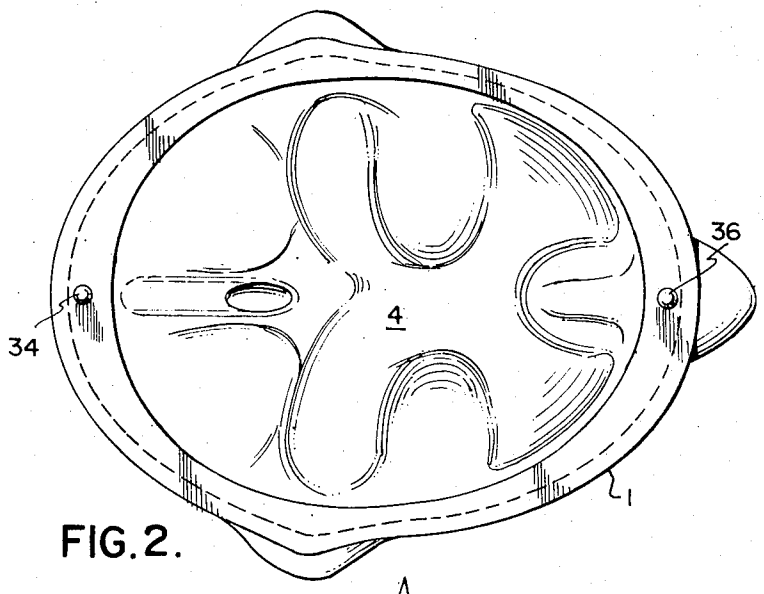


FIG. 2.

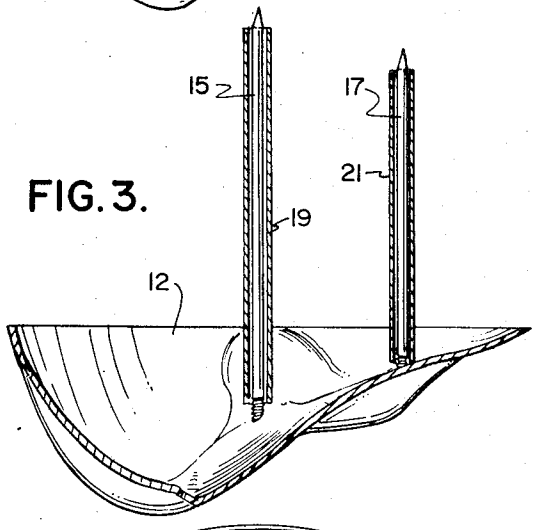


FIG. 3.

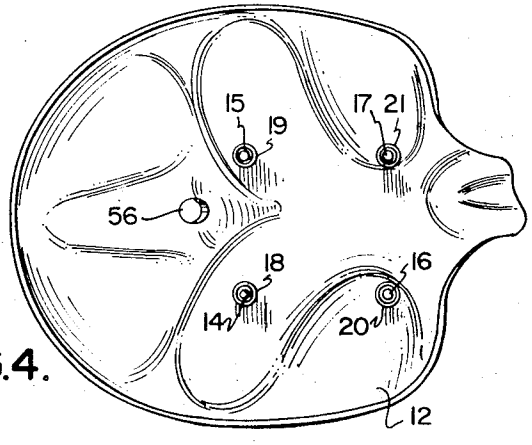


FIG. 4.

BRAIN BIOLOGICAL SPECIMEN POST MORTEM INSPECTION AND PRESERVING VESSEL

This invention relates to a brain biological specimen post mortem inspection and preserving vessel.

An urgent requirement exists for a better storage vessels for a brain biological specimen than the plastic bucket that is presently used in, for example, Departments of Anatomy, Pathology and Forensic Medicine for post mortem inspection and preservation. The brain specimen may be a whole or a part of a human or animal brain biological specimen.

The underlying reasons for such a requirement are:

a. there is a tendency for fumes of preserving liquid to leak from the standard commercially available bucket causing inconvenience to a dissector,

b. The opacity of the material used in standard commercially available buckets renders it difficult for a dissector to see the portion of the brain being dissected,

c. portions of the brain tend to lose their correct anatomical position as the dissection proceeds, and

d. due to the flexibility of the standard commercially available bucket and its shape there is tendency for preserving liquid to spill from it when the bucket is being transported.

It is an object of the present invention to provide a brain biological specimen post mortem inspection and preserving vessel from which the tendency for preserving liquid to inconvenience a dissector is reduced, the vessel is transparent facilitating observation of the specimen by the dissector, and anatomical positions of portion of the brain tend to be maintained during dissection, and there is little likelihood of preserving liquid being spilt from the vessel when the vessel is being transported.

According to the present invention there is provided a brain biological specimen post mortem inspection and preserving vessel, comprising a transparent container having an open top forming a brain examination access opening, and a cavity shaped for holding a brain specimen in substantially the same position as the cranium, a lid sealing the open top of the container, and means for locking the lid to the container in the closed position.

Brain biological specimen post mortem inspection and preserving vessels according to the present invention may be used to contain whole or parts of a human or an animal brain. Thus in this specification "brain specimen" means a whole or a part of a human or an animal brain.

In the accompanying drawings which illustrate, by way of example, an embodiment of the present invention,

FIG. 1 is a sectional side view of a brain biological specimen post mortem inspection and preserving vessel without a removal insert therefor in position,

FIG. 2, is a plan view of the vessel shown in FIG. 1 with a lid portion removed,

FIG. 3 is a sectional side view of a removable insert of the vessel shown in FIG. 1, and

FIG. 4 is a plan view of FIG. 3.

In FIGS. 1 and 2 there is shown a brain biological specimen post mortem inspection and preserving vessel, comprising a transparent container 1 of acrylic resin, having an open top 2 forming a brain examination access opening, and a cavity 4 shaped to cradle the brain in substantially the same position as the cranium, a lid 6 of transparent acrylic resin and sealing the open top 2 of the container 1, and means 8 and 10 for locking the lid 6 to the container 1 in the closed position.

In this embodiment the container 1 and lid 6 are headshaped and hold the brain in its natural upright position but it is within the scope of the invention for the container 1 and lid 6 to cradle the brain in other positions, for example, the brain may be cradle lying on one side or inverted from its natural upright position. Also in this embodiment the lid 6 is shaped for the reception of an upper portion of the brain, a removable insert designated 12 in FIGS. 3 and 4 is for placement within the container 1 and has substantially the upper surface contour as the cranium base to cradle a brain in the same manner, and means in the form of upstanding pins 14 to 16 are provided for retaining a brain on the removable insert 12 during examination. The pins 14 and 15, which are identical, are larger than the pins 16 and 17 which are identical. Sleeves 18 to 21 are provided on pins 14 to 17 respectively.

The container 1 has a platform 22 shaped to the contour of the underside of the removable insert 12, and a brain preserving liquid draining means 24 is provided on the container 1. The liquid draining means 24 comprises a pipe 26 leading from the platform 22 and terminating outside the container 1 with a sealing cap 28 screwed on to the end thereof. The container 1 has a base portion 30 for standing the container 1 in a upright position.

A gasket 32 of silicone rubber is attached to the upper edge 33 of the casing 1, and two locating pins 34 and 36 are mounted to protrude from the upper edge 33. The rear of the casing 1 has a clasp 38 mounted on it, and the front of the casing 1 has a hook 40 mounted on it.

The lid 6 has a brain preserving liquid entry 42, and a cap 44 is screwed on to the entry 42 to seal it. A flange 46 on the lid 6 has two holes 48 and 50 for the reception of the locating pins 34 and 36 respectively, and also rests upon the gasket 32. A clasp 52 is mounted on the front of the lid 6 for engagement with the hook 40, and a hook 54 is mounted on the rear of the lid 6 for engagement with the clasp 38. The clasp 38 and hook 54 form the means 8, and the clasp 52 and hook 40 form the means 10.

The removable insert 12, FIGS. 3 and 4 has a brain preserving liquid outlet 56.

In operation a brain specimen is placed on the removable insert 12 with the sleeves 18 to 21 on the pins 14 to 17 respectively and spiked into the brain specimen. The removable insert 12 with the brain specimen on it is placed in the container 1 on the platform 22. The lid 6 is placed on the container 1 and secured in position by actuating the clasps 38 and 52 to engage the hooks 40 and 54 respectively. The cap 44 is removed and the space around the brain specimen in the container 1 and lid 6 are filled with a preserving liquid. The cap 44 is then replaced and the brain specimen may thus be stored in a preserved condition whilst being visible for inspection.

Should it be desired to dissect the brain specimen then the caps 28 and 44 are removed to drain preserving liquid from the container 1 and the lid 6. The lid 6 is then removed, by actuating the clasps 38 and 52, to

expose for dissection an upper portion of the brain specimen which is proud of the container **1**. After dissection, or during intervals in the dissection, the lid **6** may be replaced once more and the container **1** and lid **6** filled with preserving liquid.

The apparatus according to the present invention is useful for students of, for example, anatomy, pathology or forensic medicine because after a dissection by the student the lid **6** may be replaced on the container **1**, and the container **1** and lid **6** filled with preserving fluid so that a lecturer may inspect the student's dissection at leisure without removing the lid **6**.

The provision of the sleeves **18** to **21** allows a brain specimen to be removed from the platform **22** with the sleeves **18** to **21** remaining in the brain specimen, so that when the brain specimen is replaced on the platform **22** the sleeves **18** to **21** located around the pins **14** to **17** once again and prevent further damage to the brain specimen by being impaled on the pins at other positions than the original damage.

An advantage with the apparatus according to the invention is that a relatively small quantity of preserving liquid is required when compared to the conventional plastic buckets used for the same purpose. This is an important consideration when one considers the costs of some preserving liquids.

A further advantage with the apparatus according to the present invention, when it is used by students, is the topographical correlation maintained between the head shaped container and the brain specimen.

It has also been found that using the apparatus according to the present invention a dissector is not subjected to anywhere near the amount of noxious fumes from the preserving liquid than is experienced using the conventional plastic bucket.

In other embodiments of the invention the container **1** and lid shaped are shaped as the head of an animal such as, for example, a monkey and have the interior shaped to receive a brain specimen of that animal.

In further embodiments of the invention a brain specimen is placed directly into the container **1** without the use of an insert, and the interior of the container **1** is shaped to cradle the brain specimen in the same manner as the cranium.

It will be appreciated when transporting the container **1** containing a brain specimen and preserving fluid and sealed by the lid **6**, there is little likelihood of preserving fluid being spilled.

We claim:

1. A brain biological specimen post mortem inspection and preserving vessel, comprising a transparent, head-shaped container having an open top forming a brain examination access opening and a cavity for holding the brain specimen in its natural upright position in the cranium, a removal insert within the container and having substantially the same upper surface contour as the cranium base to cradle the brain in the same manner as the cranium base, a plurality of upstanding pins on the removable insert for retaining the brain specimen thereon, a sleeve on each pin and over each of which the brain specimen is to be impaled, a lid shaped for the reception of an upper portion of the brain specimen, and means for locking the lid to the container in the closed position.

2. A vessel according to claim **1**, wherein a brain preserving liquid entry is on the lid, a cap seals the brain preserving liquid entry, and brain preserving liquid draining means are provided on the container.

* * * * *