

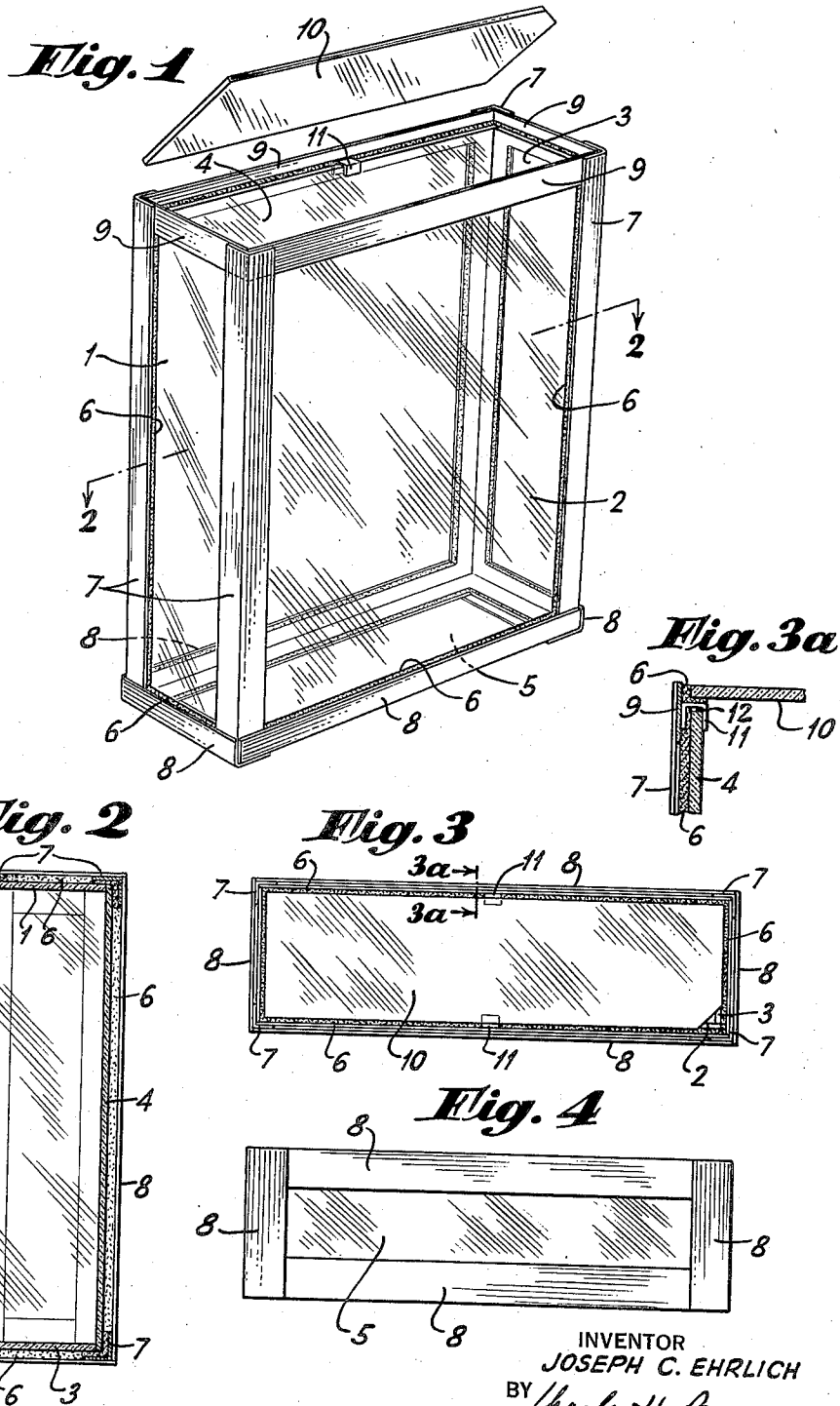
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SPECIMEN CASE

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SPECIMEN CASE

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This invention relates to specimen cases for accommodating pathological and other natural specimens.

The specimen containers heretofore commonly used are known as museum jars and have been made by blowing same in a mould. These jars consist mainly of a rectangular shaped container, having five sides integrally blown, and a sixth side, usually the top, left open for the purpose of placing the specimen in the jar. This sixth side is customarily closed by a glass top which is sealed with a suitable cement to the container, there being provided in the glass top a vent hole for final filling, the vent hole, in turn, itself being subsequently sealed.

Such known jars have the following difficulties and disadvantages:

First: Because of the relatively great strain on the walls, produced not only by the contained liquids but also frequently by the great weight of the contained specimen, the walls of the jars must be of suitable thickness, the larger jars not less than 6 mm. In order to manipulate such large quantities of glass in the process of manufacturing the jar, by either the machine or individual blowing methods, the jars must be of a width greater than that actually required by the specimens and it has been almost impossible to produce jars of the larger face sizes with a narrow depth. Second: It has been impossible to produce anything like a plane surface which is essential for correct visibility of specimens and for the often employed technique of photographing specimens through the face of the jar without removing it from the jar. The irregular surface of even the finest quality jar of this type reflects many high lights and distorts the true appearance of the contained specimen. To overcome this defect, one or more plane surfaces have been polished by grinding down the surface irregularities and imperfections. Even this polishing technique does not result in a surface equal to that of rolled plate glass. This process adds a very considerable expense to the cost of the jar, usually doubling the cost. Third: In the process of blowing such large quantities of glass, it is almost inevitable for bubbles and streaks to become contained therein, marring the surface and interfering with the proper function of the jar. Fourth: In the manufacturing process, the necessity for keeping a large mass of glass on a blowing rod, continually turned, results in marked variations in the thickness of the walls of the jar from place to place. The thicker portions are usually darker in color than the thinner,

and in the process of removing the jars from moulds, the true rectangular shape is distorted. Frequently, the center walls may be twice as thick as the corners, one side twice as thick as the other, and the bottom twice as thick as the top. Fifth: The manufacturing expense is prohibitive, mainly because of the almost endless variety of specimen sizes, which require an equally large number of moulds. These moulds, whether of wood or metal, are expensive, and are gradually destroyed through continuous use, thus requiring replacement. Sixth: When the jar is finally sealed, a completely rigid glass case is produced without any opportunity for "give" in any direction. Expansion and contraction of the jar and contents, due to temperature changes as well as internal strain and stress from external handling, sometimes result in cracking the jar. Seventh: The sealing surface which is usually present between the free edge of the open side and the adjacent edge of the cover plate, both of which are usually ground to provide a more suitable surface for the adhesive, is so narrow that a complete and permanent sealing is difficult, and there frequently results leakage with the entrance of air and oxidation and discoloration of the contained specimen. Eighth: Because of the thickness necessary in the glass, the weight of these jars is considerable for their size with corresponding high costs in shipping and handling.

The foregoing faults and disadvantages are overcome in the improved specimen case of the present invention, which will now be described in conjunction with the accompanying drawing, wherein the same parts are represented by the same reference numerals.

Fig. 1 illustrates, in perspective and by way of example only, one form which the specimen case of the invention may take. The cover plate is shown separated from the specimen case for more clearly illustrating the construction of the device;

Fig. 2 is a sectional view of Fig. 1 along the lines 2—2, in the direction of the arrows;

Fig. 3 is a top view of the improved specimen case with the cover plate in position, but not sealed to the jar;

Fig. 3a is a sectional view of Fig. 3 along the lines 3a—3a, in the direction of the arrows; and

Fig. 4 is a bottom view of the improved specimen case.

Referring to the drawing in more detail, the present improved container comprises a metallic rectangular case having five clearly transparent glass windows 1, 2, 3, 4 and 5, each sealed by a

suitable cement 6 to the metal frame. These transparent windows may consist of ordinary thin panes of window glass, or else rolled plate glass, thus enabling the specimen to be clearly
 5 seen from all sides of the jar. The metal frame consists of four vertical angle irons 7, 7 attached at the bottom to four smaller angle irons 8, 8 which overlap (as shown), and at the top to four flat metal strips 9, 9. The metal used to
 10 make up the frame is quite thin and preferably rust-proof, and the elements thereof are securely fastened to one another in any suitable fashion as by welding, soldering or braising. It will be observed that the frame is so constructed that
 15 every corner thereof is covered by metal on both sides for a short distance, usually one-quarter to three-quarters of an inch. At the top of the rectangular case, the four vertical angle irons 7, 7 are joined to the four flat strips 9, 9 in such
 20 manner that they extend upward above the four side glass windows for a distance of about one-quarter inch, in order to provide within the frame a concealed shelf upon which the glass cover plate 10 may rest. When the glass cover plate
 25 10 is in position, the upper edge of the metal frame extends flush with and preferably above the upper surface of the cover plate.

In making the specimen case, the enclosed angles of the metallic frame are first covered with a suitable cement 6, before the glass win-
 30 dows 1, 2, 3, 4 and 5 are placed in position. The cement is designed to fill all spaces between the edges of the glass windows and between the ends of the glass and the metal framework, so as to
 35 provide a permanent air and water tight union between the glass windows and the metal. Flat strips 9, 9 are also fastened each to the side of the immediately adjacent glass window by a cement layer 6, and, additionally, on the longer flat
 40 sides by metal clips 11, 11. These clips are soldered or welded to the insides of the longer flat strips 9, 9, approximately at the centers, and bent over a recess or notch 12 in the top of the longer glass windows such that the upper sur-
 45 faces of the clips are flush with the upper or free edge of the glass. The clips 11, 11, together with the cement, enable the longer strips 9, 9 to resist any outward pressure at the top of the specimen case.

Cover plate 10 has one corner slightly cut away, as shown, to allow adding of fluid to the speci-
 50 men case after this cover 10 is sealed in place. When the desired amount of fluid is contained within the specimen case, this cut away corner is also sealed, thus producing a completely and
 55 permanently sealed specimen case.

The following are some of the important advantages of the present improvement over known types of museum jars:

(1) Because no moulds are necessary, nor
 60 mould replacements, the expense of manufacture is considerably reduced as compared to former products, and expense of manufacture is governed only by cost of material and labor. (2)
 65 By the use of metal corners and the introduction of a certain flexibility, suitable glass may be much thinner than that needed in former products. The width of the case is governed only by the needs of the specimen and is not influenced
 70 by any technical difficulties in blowing, thus large faced cases of narrow depth may be readily produced. (3) The quality of the surface is governed only by the quality of the rolled or plate glass used. (4) Perfect plane surface glass may
 75 be used for the sides, thus eliminating all irreg-

ularities, defects, bubbles and striae, and dispens-
 ing with the necessity for expensive polishing processes. The case has perfect visibility for
 viewing and is perfectly suitable for photograph-
 5 ing. (5) Because all glass sides are of the same gauge, there results even thickness of all sides, top, bottom and corners. (6) The specimen case retains a certain flexibility due to the plastic
 10 qualities of the cement and the flexibility of the thin gauge metal corners. This enables the specimen case to withstand internal and external stress and strain without cracking. (7)
 15 The sealing surface between the cover plate and the specimen case is in the nature of an angle surface and not a flat edge, as heretofore, in-asmuch as the cement is now in contact with the glass cover on the lower side and the free
 20 edges as well. This increased sealing surface produces a permanent fit and is not subject to leakage of fluid, thus overcoming the danger of oxidization and discoloration of the contained
 25 specimen. Because of the narrow gauge metals and glass used, the weight of the improved specimen cases relative to similar sizes in previous products, is substantially reduced with corre-
 30 sponding lower costs in shipping and handling.

It will be understood, of course, that various modifications may be made without departing from the spirit and scope of the present inven-
 35 tion.

What is claimed is:

1. A specimen case of rectangular form comprising four glass sides and a glass bottom, and a metallic frame having angle irons overlapping the side and bottom corners of said specimen
 35 case, and flat, metallic, flexible side strips at the top of said frame, said frame extending above the upper edges of said glass sides to form a concealed shelf for a cover plate, said glass sides and glass bottom being cemented to said frame to
 40 provide a fluid tight union therebetween, and clips secured inside the upper part of said frame to two of the oppositely located flexible strips and arranged to overlap the corresponding upper
 45 edges of said glass sides for resisting outward pressure at the top of said specimen case, said cover plate being cemented to said shelf and frame on all its bottom and side edges, said cover
 50 plate having a part thereof cut away for filling said specimen case, said cut-away part being sealed to provide an air and fluid tight specimen case.

2. A specimen case of rectangular form for preserving dead organs subject to decomposition, comprising four glass sides and a glass bottom, a cover plate for said case, and a metallic frame
 55 having vertical and horizontal angle irons overlapping the side and bottom corners of said specimen case, and flat, flexible metal side strips at the top of said frame extending above said glass sides, whereby the top edges of said glass
 60 sides form a supporting shelf for said cover plate, said glass sides and glass bottom being firmly cemented to said frame to provide a fluid tight union therebetween, said cover plate being adapted to be attached to said supporting shelf in fluid
 65 tight relation.

3. A specimen case of rectangular form comprising four glass sides and a glass bottom, a cover plate for said case, and a metallic frame
 70 having angle irons overlapping the side and bottom corners of said specimen case, and flat flexible side strips at the top of said frame extending above said glass sides, whereby the top edges
 75 of said glass sides form a supporting shelf for

5 said cover plate, said glass sides and bottom being
cemented on all edges to said frame to provide a
fluid tight union therebetween, the top edges of
said glass sides being cemented to the bottom of
10 said cover plate, and means permanently secured
inside at least one of said flat side strips and
overlapping at least one of said upper edges of
said glass sides for resisting outward pressure at
the top of said specimen case due to expansion of
15 the contents of said case.

4. A specimen case of rectangular form for
preserving dead organs subject to decomposition,
comprising four glass sides and a glass bottom, a
cover plate for said case, and a metallic frame
15 having angle irons overlapping the side and bot-

tom corners of said specimen case, and flat me-
tallic flexible side strips at the top of said frame,
said frame extending above the upper edges of
said glass sides, whereby said upper edges form a
5 supporting shelf for said cover plate, said glass
sides and glass bottom being cemented to said
frame to provide a fluid tight union therebetween,
and clips secured inside the upper part of said
frame to two of the oppositely located flexible
10 strips and arranged to overlap the corresponding
upper edges of said glass sides for resisting out-
ward pressure at the top of said specimen case,
said cover plate being adapted to be attached to
said supporting shelf in fluid tight relation.

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