

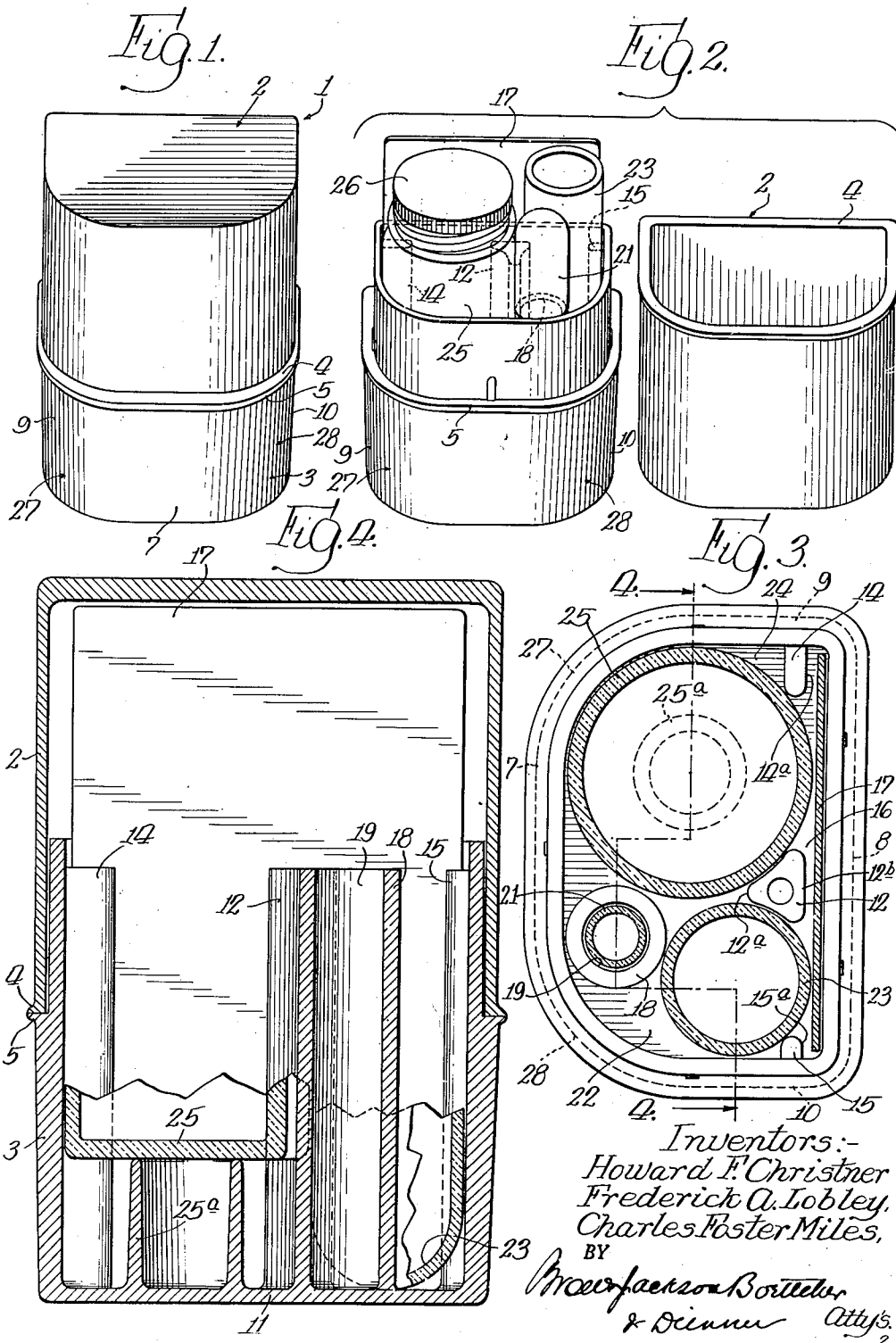
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CONTAINER

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# UNITED STATES PATENT OFFICE

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## CONTAINER

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The present invention relates to an improvement in containers, and more particularly has reference to containers of a character providing for the convenient storing and handling of ingredients and essential implements for conducting analytical tests such, for example, as the testing of urine for the sugar content thereof.

It is the present practice of many diabetics to frequently conduct tests of the urine to determine the sugar content thereof, and to meet the needs of such persons a compact testing kit containing the ingredients and implements necessary to perform the tests is highly desirable. Also physicians have need for a compact kit which they may conveniently carry to perform tests of the above character wherever they might be. Previously kits of this character have usually been made of paper and generally have been of flat substantially rectangular form comprising a slide cover for slidably receiving a removable tray or drawer. In one typical form of a prior kit, the removable slide or drawer is provided with lengthwise extending partitions forming compartments for receiving, for example, one or more glass tubes containing the chemical ingredients to be used in the test, a medicine dropper for measuring fluid, and a test tube in which the reaction is effected. In this container one end is provided with a paper plate member supported in spaced relation with respect to the bottom or base of the slide drawer, which plate member is apertured to receive and support the test tube in a vertical position. This form of container has many disadvantages in that it is awkward to handle and is of such proportion that it cannot be conveniently kept on a shelf or in a medicine cabinet. The paper test tube holder is unsatisfactory in that it is not resistant to destruction by water or dampness or to the strong caustics used in testing that might be spilled thereon so that the container becomes unsightly and unfit for use after a short period of use. Also, containers made of paper board are unsatisfactory in that they offer little protection against breakage of glass implements contained therein, such as a test tube or medicine dropper. Further, in such paper containers no part thereof may be adapted for use as a receptacle to collect a sample of the fluid to be tested, such as the urine.

It is an object of our invention therefore to provide a container which may be conveniently carried and stored, and in which provision is made for the convenient storing and handling

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of ingredients and implements for conducting analytical tests.

We propose to provide a container which in its preferred form comprises a base member and a cover member composed of rigid material in which the cover of the container may be used as a receptacle for collecting the specimen to be tested. The base of the container is preferably provided with means dividing it into a plurality of compartments, one of which is adapted to receive a bottle which contains the ingredients for conducting the tests of specimens, and by virtue of the form of the container this bottle may be provided with a screw cap which is of distinct advantage in the handling of caustics. Other compartments are for the reception of, for example, a test tube, and a medicine dropper, and in instances where an information, direction or comparative color chart is desired, the base of the container may be further provided with a compartment for receiving such a chart.

In the preferred form of our invention the cover and the base members of the container are preferably made of plastic material. The container is of substantially oblong form and preferably of a width providing for its convenient disposal on the shelf or for carrying, for example, in a physician's bag or upon the person. By making the two parts of the container of plastic material the cover member may serve as a receptacle for the test specimen, and the base member having the compartments for receiving the glass implements provides a stand which may be used a long time without being destroyed by any of the materials being handled. The container is preferably made of a plastic material resistant to caustics so that it is not destroyed by the latter. Also, the arrangement of the compartments in the base members for the glass implements such as the test tube, the medicine dropper, and the bottle containing the ingredients for conducting the tests, protects them against breakage since the material of which the container is made offers substantial protection thereagainst when it is dropped or roughly handled.

The container herein disclosed also is of pleasing appearance as well as being adapted to serve in the functional respects above noted.

Other objects and advantages of our invention will appear from the detail description.

Now in order to acquaint those skilled in the art with the manner of constructing and utilizing a device in accordance with our invention, we

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shall disclose in conjunction with the accompanying drawing a preferred embodiment of the same.

In the drawing:

Figure 1 is an isometric view of the container of our present invention;

Figure 2 is an isometric view of the base and cover of the container of Figure 1, with the cover removed and disposed alongside the base showing the manner in which several implements and ingredients for conducting analytical tests are disposed or carried in the base;

Figure 3 is a plan view of the open end of the base member of Figure 2 and showing in section the several implements disposed therein; and

Figure 4 is a detail vertical sectional view through the container taken substantially on the line 4—4 indicated on Figure 3 and looking in the direction indicated by the arrows.

Referring now to the drawing, we have shown a container 1 comprising a hollow cup-shaped cover member 2 and a substantially hollow cup-shaped base member 3 formed preferably of a plastic material such as black Tenite. The cover member and base member preferably are formed with wall members having telescopic engagement with each other for assembling the members together. The cover member 2 is formed with a peripheral flange 4 about its open end which is adapted to abut a peripheral flange 5 formed intermediate the closed and open ends of the base member 3 providing for positioning of the cover and base 3 with respect to each other in the closed position of the container as shown in Figure 1. As previously noted the cover 2 is substantially cup-shaped and when removed from the base member provides for the convenient collection of a specimen to be tested.

For the purpose of this disclosure the container will be described as it is made up for use in testing for the sugar content of urine, but it will be understood that the container may be adapted to a wide variety of other uses.

The base member 3 comprises front and rear walls 7 and 8, respectively, and a pair of side walls 9 and 10 extending generally at right angles to the front and rear walls, and connected to the front wall 7 by the arcuate walls 27 and 28, respectively. A flat end or bottom wall 11 lies in a plane extending transversely of the front, rear and side walls at right angles thereto and provides for the support of the base and the container as shown in the several figures.

A standard 12 is disposed in base member 3, adjacent but spaced from rear wall 8 of said member, and offset substantially entirely to one side of a vertical plane that would bisect the front and rear walls 7 and 8 of member 3. The standard is of generally triangular shape in cross-section and of a height substantially equal to the height of the base member. The apex 12<sup>a</sup> of the standard is directed toward the front wall 7 of member 3, while the face 12<sup>b</sup> of the standard is disposed parallel to wall 8 of said member.

Flanges or partitions 14—15 are directed inwardly of member 3 from the side walls 9 and 10 thereof, respectively. These partitions are substantially equal in height to standard 12 and are so positioned in member 3 that their faces 14<sup>a</sup> and 15<sup>a</sup> are adapted to lie in the plane of the face 12<sup>b</sup> of standard 12. In conjunction with wall 8, standard 12 and partitions 14 and 15 cooperate to define a compartment 16 adapted for the reception of a chart 17, such as a keyed color chart with which the specimen being tested may

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be compared and from that the amount of sugar in the tested specimen determined.

Closely adjacent wall 7 of member 3, and slightly offset from standard 12 toward wall 10 of member 3, is positioned a second standard 18. This latter standard is tubular in form and has a height substantially equal to the height of standard 12 and partition 15. In the specific embodiment disclosed, bore 19 of standard 18 is intended to define a compartment adapted to receive a medicine dropper 21.

Standards 12—18 and partition 15, in conjunction with side wall 10 of member 3, cooperate to define a compartment 22 adapted for the reception of a test tube 23. The tube is supported in an upright position and restrained against movement relative to member 3 by the elements mentioned. That permits member 3 to function as a test tube rack, the tube being supported in an upright vertical position for conduction of a test.

The standards 12—18 and partition 14, in conjunction with walls 7 and 9 of member 3 and the arcuate wall 27 also cooperate to define another compartment 24 adapted for the reception of a bottle or other receptacle 25, which is adapted to contain tablets composed of, for example, copper sulphate, caustic soda and citric acid in suitable proportions so that a tablet may be used for conducting tests of a urine specimen. Bottle 25 is of the type closed by a screw cap 26, which form of bottle is highly desirable in the handling of caustic materials. A substantially tubular boss 25<sup>a</sup> is positioned substantially centrally of compartment 24 and projects upwardly from base 11 to provide a support for bottle 25. The purpose of this boss is to position the bottle 25, which is of the type commonly employed to dispense the tablets referred to above, in relationship to tube 23 and dropper 21 as shown in Figure 2 of the drawing. The height of this boss then will depend upon the height of the bottle employed and, with a proper size bottle, may be dispensed with.

The standards 12—18, partitions 14—15 and boss 27 are formed integrally with member 3 in the molding thereof.

In Figure 2 the base member is shown with the several test implements, namely, the bottle 25, the test tube 23, the medicine dropper 21, and the color chart 17, assembled in the container. With the parts in this position the cover 2 may readily be assembled with the base member and form the container shown in Figure 1. It will be observed that the several implements when assembled in the base member project beyond the open end thereof which arrangement renders it convenient to remove these elements from the base member. The spacing of the cover with respect to the base by the peripheral flanges 4 and 5 of the cover and base, respectively provides room within the cover for the projected ends of the several implements when the cover is placed upon the container to close the same.

If desired the base or cover members may be embossed with the initials or name of the owner, or of the physician, or other advertising matter or data as desired.

In use, the cover is removed from the container which, as previously noted, is adapted to provide for collection of the specimen. After the specimen has been collected the medicine dropper 21 is utilized for transferring the specimen from the cover member 2 to the test tube 23, the specimen then being diluted with water. A tablet is

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then removed from the bottle 25 and placed in the diluted specimen in the test tube. After the elements have reacted, the test tube may be grasped and removed from the base member 3 to compare the color of the reaction in the test tube with the color chart, which previously may have been removed from the compartment 16, which comparison gives an indication of the sugar content of the specimen.

While we have shown what we consider to be the preferred embodiment of our invention it will be understood that various rearrangements and modifications may be made therein without departing from the spirit and scope of the invention.

We claim:

1. In a container of the class described, a base member formed of moisture resistant material, said base member being open at one end and comprising front and rear walls, a pair of side walls, one of said side walls being rounded at its intersection with said front wall, and a bottom wall lying in a plane extending transversely of said side, front and rear walls substantially at right angles thereto, a standard formed integrally with said bottom wall extending vertical thereto and positioned in said base member adjacent but spaced inwardly of said rear wall, a second standard formed integrally with said bottom wall extending vertical thereto and disposed adjacent said front wall, a pair of partitions one each being formed integrally with and extending inwardly of each of said side walls in alignment with said first standard to define a compartment between the same and said rear wall, one of said pair of partitions together with the rounded intersection of said front wall with said one side wall and the first and second standards forming a compartment.

2. In a container of the class described, a base member formed of moisture resistant rigid material, said base member being open at one end comprising front and rear walls, a pair of side walls, one of said side walls being rounded at its intersection with said front wall, and a bottom wall lying in a plane extending transversely of said side, front and rear walls substantially at right angles thereto, a standard formed integrally with said bottom wall extending vertical thereto and positioned in said base member adjacent but spaced from said rear wall, a second standard positioned adjacent to said front wall, a pair of partitions one each being formed integrally with and extending inwardly of each of said side walls in alignment with said first standard to form a compartment between the same and said rear

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wall, one of said pair of partitions together with the rounded intersection of said front wall with said one side wall and the first and second standards defining a compartment, and the other of said pair of partitions and the pair of standards together with the other side wall of said base member defining another compartment.

3. The container of claim 2 characterized by the second standard having a bore formed therein to define still another compartment.

4. In a container of the class described, a base member, said base member being open at one end and comprising front and rear walls, a pair of side walls, and a bottom wall lying in a plane extending transversely of said side, front and rear walls substantially at right angles thereto, a standard extending vertically upwardly from said bottom wall adjacent but spaced inwardly of said rear wall, a second standard extending vertically upwardly from said bottom wall and disposed adjacent said front wall, a pair of partitions extending inwardly of each of said side walls in alignment with the first standard to define a compartment between the same and said rear wall, and one of said pair of partitions together with the intersection of one of said side walls with said front wall and the first and second standard forming a compartment.

5. In a container of the class described, a base member, said base member being open at one end and comprising front and rear walls, a pair of side walls, and a bottom wall lying in a plane extending transversely of said side, front and rear walls substantially at right angles thereto, a standard extending vertically upwardly from said bottom wall adjacent but spaced inwardly of said rear wall, a second standard extending vertically upwardly from said bottom wall and disposed adjacent said front wall, a pair of partitions extending inwardly of each of said side walls in alignment with the first standard to define a compartment between the same and said rear wall, one said pair of partitions together with the intersection of one of said side walls with said front wall and the first and second standard forming a compartment, and the other of said pair of partitions and the pair of standards together with the other of said side walls of said base member defining another compartment.

6. The container of claim 5 characterized by the second standard having a bore formed therein to define still another compartment.

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