Dec. 17, 1957 P. A. RAICHE 2,816,551

MALE URINAL

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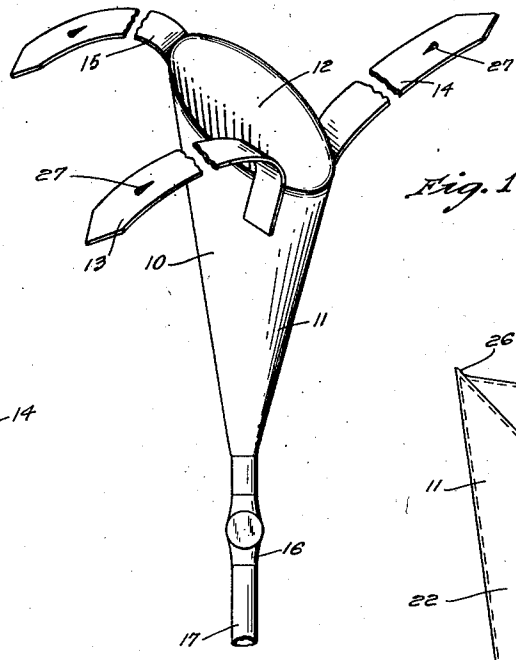


Fig. 1

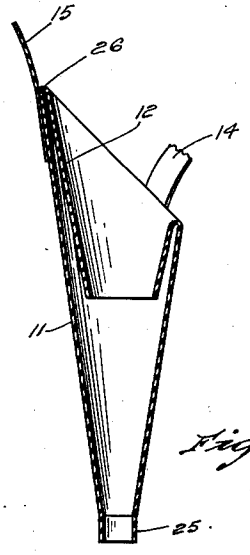


Fig. 2

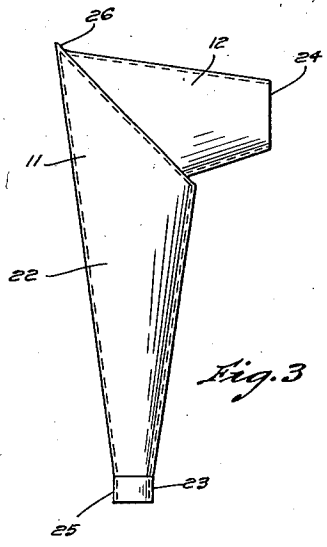


Fig. 3

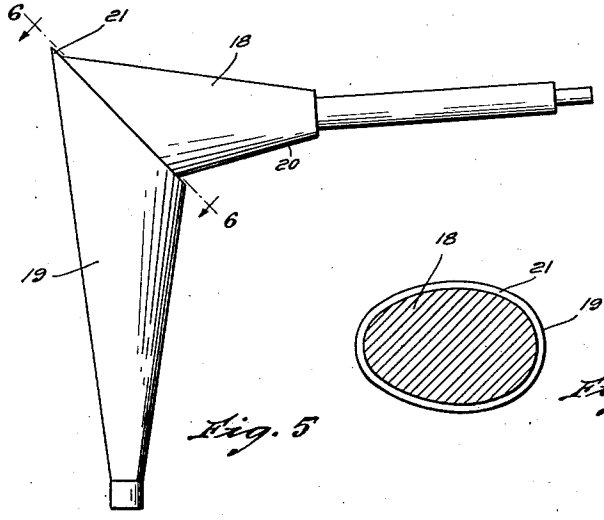


Fig. 5

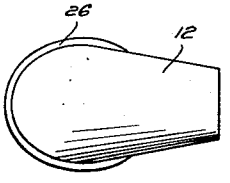


Fig. 4

Fig. 6

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MALE URINAL

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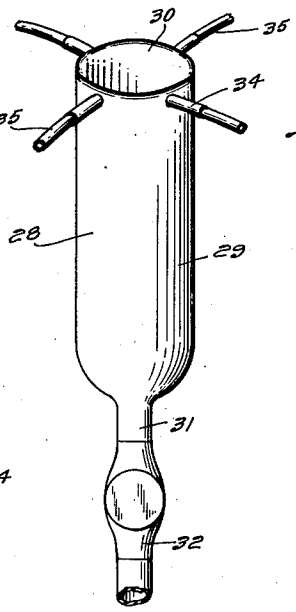


Fig. 7

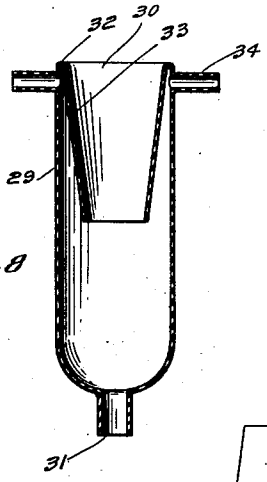


Fig. 8

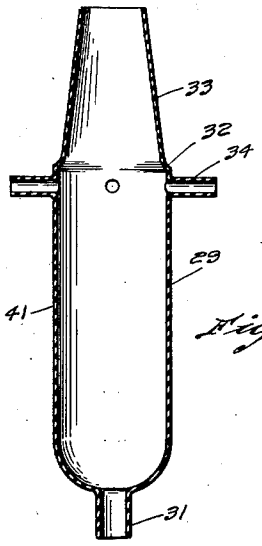


Fig. 9

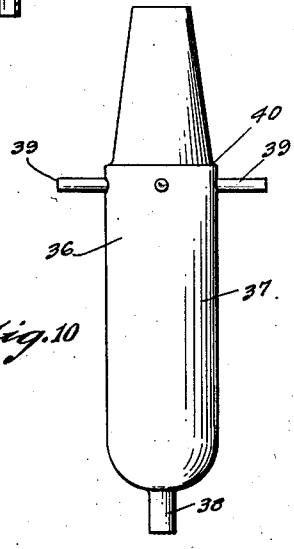


Fig. 10

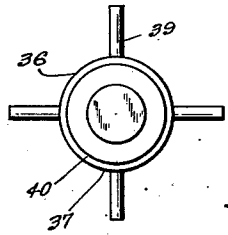


Fig. 11

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2,816,551

MALE URINAL

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Application January 4, 1954, Serial No. 401,991

3 Claims. (Cl. 128—295)

The present invention relates to medical apparatus for incontinent patients, and has particular reference to a novel construction for a male urinal.

The principal object of the invention is to provide a one-piece male urinal having a closure sheath.

Another object of the invention is to provide a manufacturing procedure for making a male urinal with an integral closure sheath.

An additional object of the invention is to provide a one-piece male urinal which has thin wall sections and is very comfortable to wear.

With the above and other advantageous features in view, the invention consists of a novel method of manufacture and a novel arrangement of parts more fully disclosed in the detailed description following, in conjunction with the accompanying drawings, and more specifically defined in the claims appended thereto.

In the drawings,

Fig. 1 is a perspective view of an illustrative male urinal construction embodying the invention;

Fig. 2 is a vertical section through the urinal of Fig. 1;

Fig. 3 is a side view of the urinal body blank after dip forming;

Fig. 4 is a top plan view of Fig. 3;

Fig. 5 is a side view of the body blank dipping form;

Fig. 6 is a section on the line 6—6 of Fig. 5;

Fig. 7 is a perspective view of a modified construction;

Fig. 8 is a vertical section through the urinal of Fig. 7;

Fig. 9 is a vertical section through the urinal body blank after dip forming;

Fig. 10 is a side view of the body blank dipping form; and

Fig. 11 is a top plan view of Fig. 10.

It has been found desirable to provide a one-piece male urinal which includes a cone-shaped closure sheath and has thin wall sections, whereby the urinal fits better and is more comfortable. To this end, I have devised a dipping form of special shape on which a urinal blank is dipped having a body with an outer wall, and an integral inwardly foldable cone-shaped sheath, the body at its juncture with the sheath being inwardly flanged to permit a smooth folding of the sheath into the body.

Referring to the illustrative embodiment of the invention shown in Figs. 1 to 6, the urinal **10** includes a cone-shaped body **11** having an inwardly folded conical sheath **12**, see Fig. 2; the body is provided with thigh straps **13**, **14**, and with a waist-strap or straps **15** of standard type, and has a valve connector element **16** at the lower end communicating with a conduit **17** of a leg bag or the like, not shown.

The urinal is made on a form **18**, see Fig. 5, of special shape, which has a body portion **19** of conical shape and a sheath portion **20** of conical shape angularly positioned with respect to the body portion, the angle between the sheath portion axis and the body portion axis being slightly greater than 90 degrees, the base of the sheath portion being smaller than the base of the body portion, see Fig. 6, whereby an annular flange area **21** is provided.

When the form **18** is dipped in standard manner in latex or other suitable rubber solution and in coagulant until a latex coating of desired thickness is obtained, and the coating is stripped from the form after the usual air curing, the urinal blank **22** resulting is as shown in Figs. 3 and 4. The lower end **23** of the body **11** and the outer end **24** of the sheath **12** are trimmed, the lower end of the body being shaped as an outflow connection **25**, and the sheath **12** is folded inwardly as shown in Fig. 2, the coating portion between the base of the body and the base of the sheath at the flange area **21** forming a narrow fold **26**.

The straps **13**, **14** and **15** are of suitable material, preferably of latex, and are cemented to the outer surface of the body **11** as illustrated, the outer strap portions being provided with openings **27** for receiving buttons or the like. The valve connector element **16** may be of any suitable type for closing the urinal against drainage except when opened for this purpose, and the shield may be cut to fit snugly and close the top of the urinal against outflow.

A modified construction for the urinal is shown in Fig. 7, the urinal **28** including a body **29** having an upper inlet opening **30** and a lower outflow connection **31** which is preferably equipped with a shutoff valve device **16**, the body **29** having an upper narrow edge **32** and an inwardly folded cone-shaped sheath **33**, and having integral tabs **34** extending outwardly from the outer surface thereof to which tubular waist and thigh straps **35** are secured.

The urinal **28** is manufactured by dipping a form **36**, see Figs. 10 and 11, having a body portion **37** with a connection extension **38** at its lower end, the upper end of the body portion having laterally extending tab plugs **39** and being annularly recessed or indented as indicated at **40** to provide an annular flange from which a cone-shaped sheath portion extends upwardly. The form **36** is dipped in any suitable rubber solution, preferably a latex solution, and the coating is coagulated and air dried and then stripped, providing a urinal blank **41**, see Fig. 9, with a cone-shaped sheath which is connected to the upper end of the body by an inwardly extending annular flange, whereby the sheath is readily folded inwardly as shown in Fig. 8.

Latex is preferred as the coating material solution, but any suitable rubber or plastic solution or dispersion may be used, having the characteristics of providing a hollow article of the type described which is flexible but strong and which is not affected by the urine. Any valve closure may be used for the outflow connection, the preferred valve closure being of the type shown in my application Serial No. 401,993 filed as of even date herewith and now abandoned.

Although I have disclosed specific embodiments of my invention, it is obvious that changes in the size, shape, and proportions of the parts, and in the material used, may be made to meet different requirements for male urinals and the like, without departing from the spirit and the scope of the invention as defined in the appended claims.

I claim:

1. A one-piece male urinal of thin flexible material, having a hollow, elongated cone-shaped body with an outlet connection at its lower end, the upper end of the body having an inwardly extending flange, and a cone-shaped shield extending from the flange downwardly into the body, the body having a plurality of elongated integral straps extending upwardly and outwardly from the body upper edge, said flange being in a plane which makes an acute angle with the longitudinal axis of the body.

2. A dipping form for a male urinal, having a body

portion of conical shape, the upper surface of the body portion being in a plane at an acute angle to the longitudinal axis of the body portion, and a sheath portion of conical shape extending outwardly from the upper surface of the body portion, the angle between the body and sheath portion axes being slightly greater than a right angle.

3. In the form of claim 2, the sheath portion and the body portion at their junction being oval, with the body portion of greater area and forming an annular flange around the sheath portion.

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