Oct. 31, 1961 T. HEIL 3,005,994

PORTABLE TOILET

Filed April 28, 1959

Fig. 1

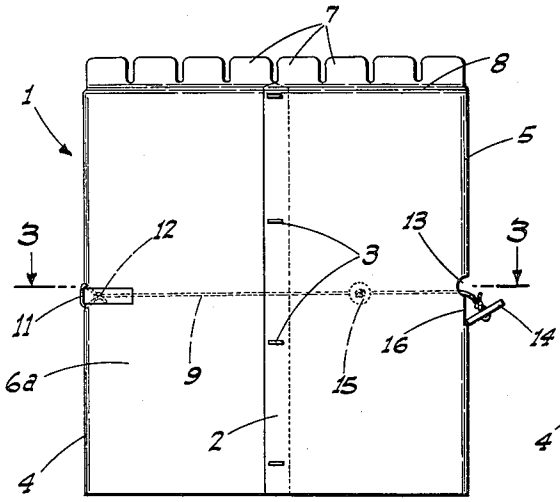


Fig. 2

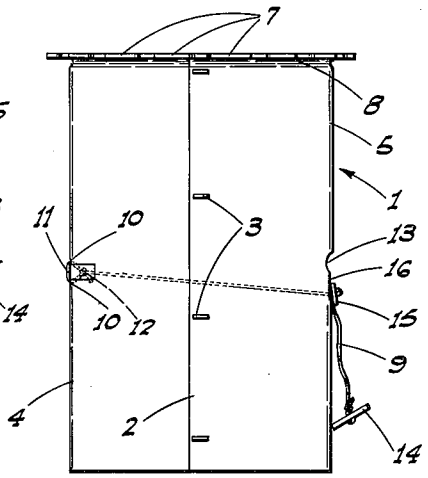


Fig. 3

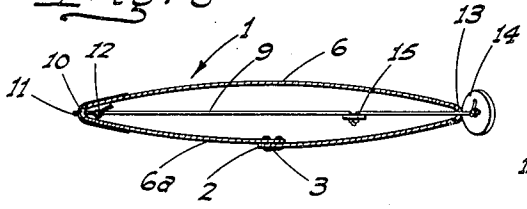


Fig. 4

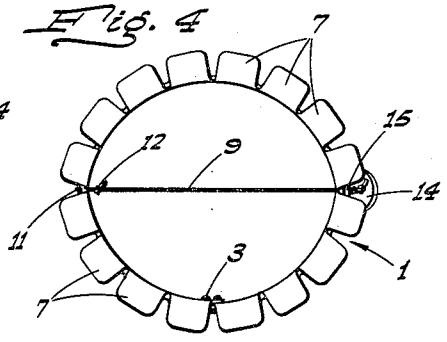


Fig. 5

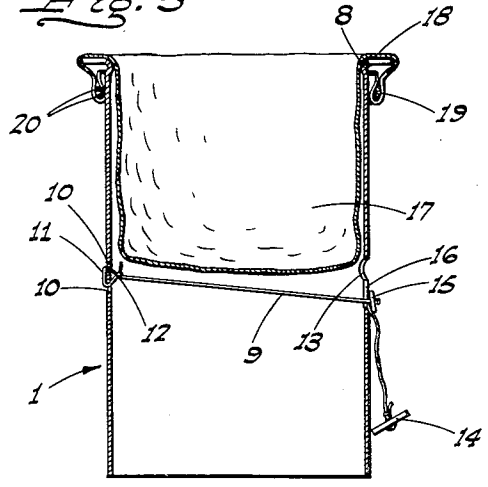
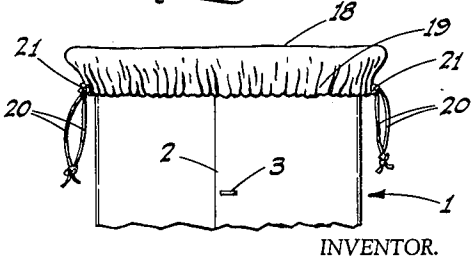


Fig. 6



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United States Patent Office

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PORTABLE TOILET

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1 Claim. (Cl. 4—142)

This invention is directed to, and it is a major object to provide, an initially collapsed, light-weight, and compact but readily assembled portable toilet essentially of a type for throw-away after use; the article being especially designed—but not limited—for use by campers or the like.

Another important object of the invention is to provide a portable toilet, as above, which includes a stiff or heavy-duty paper-board body initially folded or collapsed to a substantially flat condition, but which body is adapted to be expanded to—and secured in—a substantially cylindrical form; the body in such form resting—in use—on and upstanding from the ground, with an initially separate open-topped bag, of flexible and water-proof material, then secured to and depending into the body from its upper end as the actual toilet receptacle.

An additional object of the invention is to provide a portable toilet, as in the preceding paragraph, wherein the body includes—all about its upper end—a multiplicity of separate tabs which initially extend straight away from said end of the body, but which tabs are adapted to be bent to a laterally outwardly projecting position; the bag—when in place, and depending into the body—including a top portion which turns over and covers the bent-out tabs whereby together to form an effective seat on the toilet.

A further object of the invention is to provide a portable toilet wherein the initially collapsed body is adapted to be expanded to its substantially cylindrical form for use, and then held in such condition, by means of a novel tension cord arrangement.

It is also an object of the invention to provide a portable toilet which is designed for ease, economy, and simplicity of manufacture.

Still another object of the invention is to provide a practical and reliable portable toilet, and one which will be exceedingly effective for the purpose designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawings:

FIG. 1 is an end elevation of the paper-board body as initially folded or collapsed substantially flat, and with the tabs unbent.

FIG. 2 is an elevation of the body as expanded to substantially cylindrical form for use but before application of the bag; the tabs being bent to their laterally outwardly projecting positions.

FIG. 3 is a sectional view on line 3—3 of FIG. 1.

FIG. 4 is a top plan of the expanded body as in FIG. 2.

FIG. 5 is a sectional elevation of the portable toilet fully assembled and ready for use.

FIG. 6 is a fragmentary elevation of the upper portion of the portable toilet assembled, as in FIG. 5.

Referring now more particularly to the drawings, and to the characters of reference marked thereon, the body, indicated generally at 1, comprises a single rectangular but elongated sheet of relatively stiff or heavy-duty paper-board; the ends of the sheet being lapped, as at 2, with the lapping portions stapled or otherwise secured together, as at 3.

The sheet which comprises the body 1 is then folded or collapsed at opposed vertical score lines 4 and 5 into adjacent facing rectangular panels, indicated at 6 and 6*a*; the score lines 4 and 5 being disposed so that the lapped

and stapled-together ends 2 are intermediate the sides of panel 6*a* (see FIG. 3).

The body 1 is formed all about its upper end—i.e., along the upper edges of the panels 6 and 6*a*—with a multiplicity of closely spaced but separated tabs 7 which initially extend in integral relation straight away from said body, as shown in FIG. 1; there being an external horizontal score line 8 between such tabs 7 and the related panels 6 or 6*a*.

An initially slack tension cord 9 lies intermediate the panels 6 and 6*a* of the collapsed body 1 substantially centrally of the upper and lower ends thereof; such cord 9 extending substantially horizontally from the bend at score line 4 to the bend at score line 5. Along the bend at score line 4 there are two adjacent but vertically spaced holes 10; the corresponding end portion of the cord 9 being looped through such holes 10, as at 11, and knotted, as at 12.

In opposition to holes 10, and spanning the bend at score line 5, the body is formed with an opening 13; the cord 9 passing through said opening 13 and terminating at a free end outside of said body. At its free end the cord 9 is fitted with a pull-button 14 of a diameter greater than that of opening 13, which prevents such button and the free end of the cord from accidentally escaping into the body 1.

Another button 15 is affixed to the cord 9 at a point initially within the confines of the body 1, i.e., between the panels 6 and 6*a*; such button being a predetermined distance from the bend at score line 4, and of a diameter to readily pass through the opening 13 which spans the bend at score line 5.

A relatively short slit 16 is cut downwardly in the body along score line 5 from the bottom of opening 13; such slit however being of a length greater than the diameter of button 15. The opening 13 and slit 16 provide—in effect—a keyhole slot.

The body 1, as above described, and a flexible bag 17 of water-proof material, such as plastic, are initially carried by the camper or the like in folded or collapsed condition; thus being quite compact and easy to store and transport.

For use of the portable toilet, the body 1 is first expanded to a tubular or substantially cylindrical form by pressing with one hand against the bend at score line 5, and grasping the button 14 with the other hand and pulling outwardly on the cord 9. This causes the initially folded or collapsed body 1 to assume a tubular or substantially cylindrical open-ended form; the button 15 being pulled through the opening 13 and the adjacent portion of the cord 9 drawn downwardly in the slit 16 until said button 15 rests against the outer face of the body 1. This locks the body in its substantially cylindrical form, for the reason that the length of the cord from the loop 11 to the button 15 substantially equals the diameter of said body as expanded. See FIGS. 2 and 4.

Nextly, the tabs 7 are each bent—at the score line 8—to a laterally outwardly projecting position.

After the body 1 has been expanded and the tabs 18 bent out, in the manner above described, the bag 17 is placed in said body from its upper end and depends into the same to a point adjacent the cord 9; such bag being of a diameter to fit relatively closely within such body. At its top portion the bag 17 is turned over the laterally outwardly projecting tabs 7, as at 18, and thence turned down slightly therebelow; the immediate top portion of the bag being formed with a hem or heading 19 through which a double-ended draw string 20 passes. The draw string is then pulled tight and knotted at its ends, as at 21. This contracts and puckers the heading 19 beneath

the laterally outwardly projecting tabs 7 and secures said heading tightly about the body 1, whereby to maintain the bag 17 against downward displacement—beyond its normal position—in said body 1.

With the body 1 expanded, and with the bag 17 arranged therewith in the manner described, the assembly provides a very practical and convenient portable toilet; the laterally outwardly projecting tabs 7, together with the portion 18 of the bag which is turned over said tabs, comprising an effective seat.

From the foregoing description it will be readily seen that there has been produced such an article of manufacture as will substantially fulfill the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the article of manufacture, still in practice such deviations from such detail may be resorted to as do not form a department from the spirit of the invention, as defined by the appended claim.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

A portable toilet device to support a disposable and flexible bag comprising an upstanding tubular body of bendable but relatively stiff material, said body having a pair of opposed vertical score lines thereon and being initially collapsed by bending on said lines to a substantially flat condition and adapted to be expanded to a substantially circular form to then receive the bag, means

to expand the body comprising an initially slack non-elastic tension cord connected at one end to the body adjacent one score line and extending in said body to adjacent the other score line, the body having an opening adjacent said other score line and through which the cord freely passes for finger grasping, the body being expanded upon outward pulling of the cord while the body at said other score line is relatively held against movement, and means to releasably secure the cord under tension with the body expanded; said last named means comprising an enlarged element on the cord intermediate its ends in position to lie outside and in contact with the body when the latter is fully expanded and of a size to freely pass through said opening; there being a cord-receiving slit in the body communicating at one end with and projecting from the opening.

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