A. R. HUSSEY.

DRINKING CUP.

APPLICATION FILED NOV. 15, 1909.

952,197.

Patented Mar. 15, 1910.

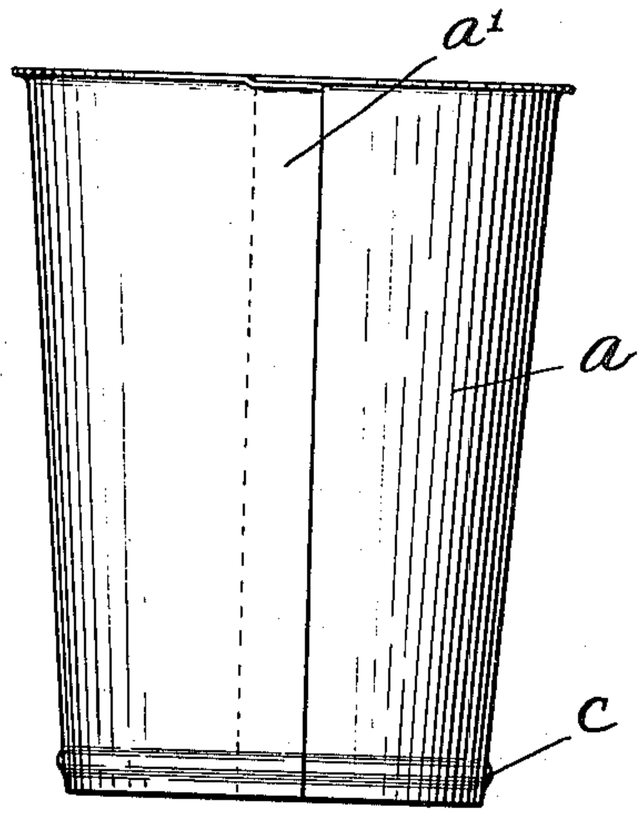

Fig. 1.

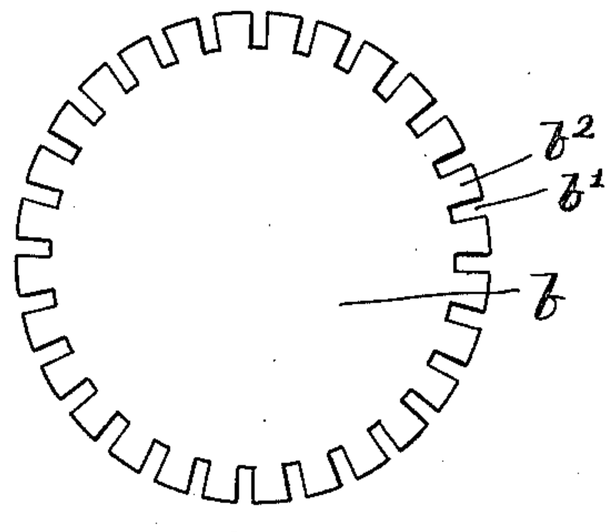

Fig. 4.

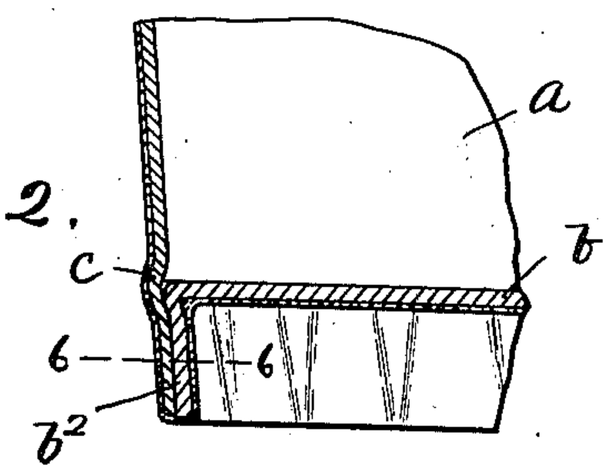

Fig. 2.

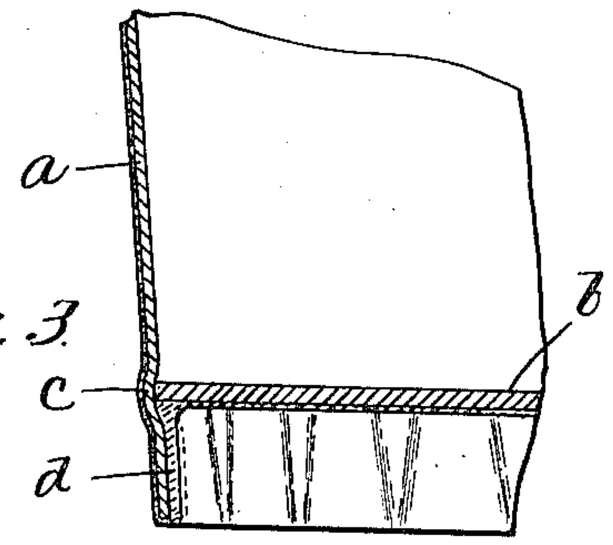

Fig. 3.

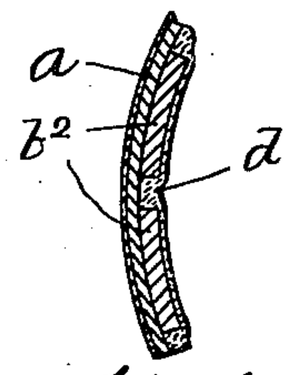

Fig. 6.

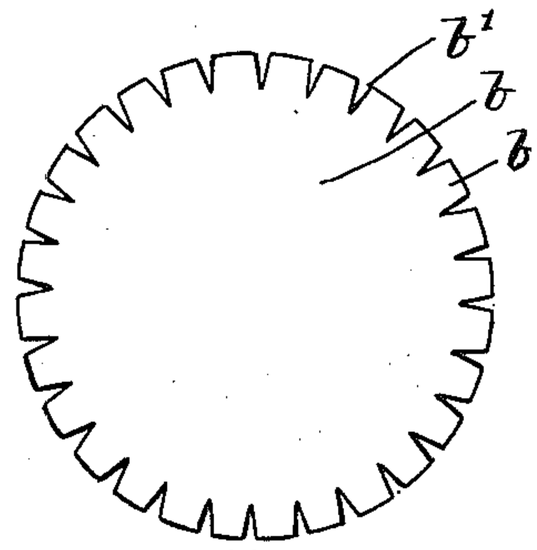

Fig. 7.

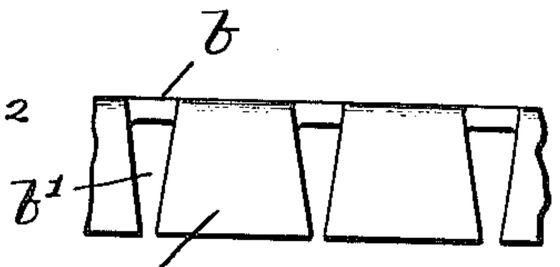

Fig. 5.

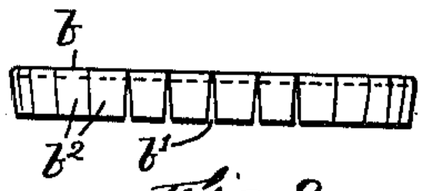

Fig. 8.

Witnesses:
H. B. Davis
D. S. Peterson.

Inventor:
Alfred R. Hussey
by Mayer & Harriman
attys.

UNITED STATES PATENT OFFICE.

ALFRED R. HUSSEY, OF HARVARD, MASSACHUSETTS, ASSIGNOR TO AMERICAN WATER SUPPLY COMPANY OF NEW ENGLAND, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

DRINKING-CUP.

952,197. Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed November 15, 1909. Serial No. 528,007.

To all whom it may concern:

Be it known that I, ALFRED R. HUSSEY, of Harvard, Worcester county, State of Massachusetts, have invented an Improvement in Drinking-Cups, of which the following is a specification.

This invention relates to drinking cups, made of paper, and intended to be used once and then thrown away, being thereby especially well adapted for use in public places where sanitary drinking cups are required.

Prior to this invention drinking cups have been made of paper, but in some instances the cost of manufacture has been too great to permit of the cups being used once and then thrown away; in other instances the construction has been such that the parts composing it became separated either before or while in use.

A drinking cup, even of the cheap form herein referred to, must be self-supporting when in upright position, so that when placed on a shelf beneath a faucet, it is not necessary to hold it, hence a cup must have a substantially rigid bottom even though its upright wall is flexible.

The object of this invention is to improve particularly the construction of the bottom of the cup, whereby the cup will be self-supporting when in upright position, and the parts composing it will not separate, as, for instance, the bottom will not fall out, either before or while in use, yet it may be made cheap enough to be used once and then thrown away, thereby adapting it for use as a sanitary drinking cup well suited for public places.

Figure 1 is a side elevation of a drinking cup embodying this invention, Figs. 2 and 3 are enlarged vertical sections of the bottom portion of the cup, Fig. 4 is a plan view of a blank composing the bottom-piece, Fig. 5 is an enlarged side view of a portion of the bottom-piece, when bent or formed into shape to be used in the manufacture of the cup, Fig. 6 is a sectional detail taken on the dotted line 6, Fig. 2, Fig. 7 is a plan view of the blank composing a modified form of bottom-piece, and Fig. 8 is an edge-view of the bottom-piece composed of the blank shown in Fig. 7.

a represents a tubular conical, or it may be cylindrical, body, which is composed of a sheet of paper bent into tubular form and its edges overlapped and glued or otherwise secured together, as at *a'*.

The bottom piece which I employ consists of a circular flat disk *b* having its margin cut or formed with interdental spaces *b'*, arranged at regular distances apart, thereby forming teeth b^2. As shown in Figs. 4 and 5 said spaces may be formed with substantially parallel sides, or, as shown in Figs. 7 and 8, may be made V-shaped. When formed with parallel sides the teeth b^2 are dovetailed in shape, and when made V-shaped the teeth b^2 have parallel sides. Said teeth b^2 are then turned down to form a broken or toothed flange extending entirely around the bottom-piece, care being taken to preserve the interdental spaces. The teeth are bent downward at their junctions with the central part of the disk, so that the material at the edge of the central part of the disk between the teeth extends across the tops of the interdental spaces. The bottom-piece thus constructed, and with its teeth arranged on its under side, is then forced into the tubular body from the top toward the bottom until the ends of the teeth occupy positions flush with the lower edge of the tubular body or thereabouts, and when so disposed the tubular body will be pressed outward slightly to form in it a groove which receives the edge of the bottom-piece, at the junction of the central portion thereof and toothed flange, said groove being represented at *c* and also when so disposed its interdental spaces *b'* are still preserved. The bottom-piece is made of quite stiff paper or cardboard and hence is springy, so that its marginal teeth have an inherent tendency to spring outward and thereby closely engage the lower end of the tubular body. The bottom-piece is thus very securely held in position by friction, yet additional means are provided for securing the bottom-piece in position as well as for sealing the joint between the bottom-piece and the tubular body. The additional means consists of a coating of paraffin-wax or equivalent material applied to the entire external surface of the cup. The paraffin-wax may be melted and applied in the form of spray, after which it congeals and forms a very solid coating on the cup. It fills, or at least partially fills, all the interdental spaces between the marginal teeth on the bottom-

piece, as shown at *d*, and thereby assists in securing the bottom-piece to the body, and particularly serves to resist downward movement of the bottom-piece by forming abutments beneath it. It also covers the teeth so that they are embedded in it and are thereby securely held, and, furthermore, the portions of the central part of the disk which extend across the tops of the interdental spaces are supported by the wax beneath them.

The completed cup is waterproof; is sufficiently cheap to manufacture to permit of its being used once and then thrown away; it has a flange at the bottom which is very stiff; it has a rigid bottom-piece whereby it is self-supporting in upright position; and its parts will not become separated before or while being used.

Obviously the cup may be employed for other than drinking purposes.

I claim:

A drinking-cup consisting of a tubular body and a circular disk having a downwardly-extending toothed flange with interdental spaces between the teeth thereof, said disk being arranged at the lower end of said body with the ends of the teeth of the flange thereof flush with said lower end of the body and a coating of paraffin-wax entirely covering the external surfaces of said body and bottom-piece, which fills the interdental spaces and embeds the teeth, thereby waterproofing and stiffening the cup and sealing the joint at the bottom, and providing abutments in the interdental spaces, beneath the edge of the bottom-piece, which assist in securely holding said bottom-piece in position, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ALFRED R. HUSSEY.

Witnesses:

B. J. NOYES,

H. B. DAVIS.