

Title (en)

Drinking cup and cover with flow control elements

Title (de)

Trinkbecher und Deckel mit Strömungsregulierenden Elementen

Title (fr)

Gobelet et couvercle à éléments régulateurs de débit

Publication

EP 0838184 A1 19980429 (EN)

Application

EP 97308376 A 19971022

Priority

- US 2980796 P 19961031
- US 2977996 P 19961025
- US 79138097 A 19970130

Abstract (en)

A drinking cup (10) having a body portion (12) and a removably attached cover (14) including an offset drinking spout (28) and an offset vent aperture (32). The drinking spout (28) and the vent aperture (32) are each surrounded by wall members (34,38) which depend generally away from an interior surface of the cover (14). An air inlet flow control valve (40) is coupled to the wall member (34) surrounding the vent aperture (32) while a liquid outlet flow control valve (42) is coupled to the wall member (38) surrounding the spout (28). Each flow control valve (40,42) includes a domed elastomeric member (48,50) containing a slit (49,51) allowing for passage of a selected fluid therethrough. The domed portions (48,50) are each surrounded by a generally circular isolating channel (60,62), and outside of each isolating channel is a perimetral portion (52) for connecting the flow control valve (40,42) to the depending wall (34,38) portion of the cover (14). Fluids passing through the slits (49,51) achieve substantially only a one-way passage as the domed curvature substantially prevents any backflow. Vacuum must be applied on the convex side of the domed portion (48,50) for sufficient elastomeric displacement to allow a fluid to pass through the slit. In the absence of such a vacuum, the sides of the slit (49,51) are maintained in contiguous contact thereby preventing any transfer of liquid or air across the respective flow control valve (40,42). Coupling means are provided for coupling the flow control valves (40,42) together, and may include handle portions (44,46) integrally attached to the perimetral portion and including joining means (54,56) for joining the handle portions (44,46) together. <IMAGE>

IPC 1-7

A47G 19/22

IPC 8 full level

A47G 19/22 (2006.01)

CPC (source: EP)

A47G 19/2272 (2013.01)

Citation (search report)

- [PX] DE 29706653 U1 19970710 - S & R KUNSTSTOFFTECHNIK GMBH [DE]
- [DYA] US 5542670 A 19960806 - MORANO EMANUEL P [US]
- [Y] WO 9319718 A1 19931014 - HABERMAN MANDY NICOLA [GB]
- [A] DE 324881 C 19200906 - CARL CADE
- [A] US 2252915 A 19410819 - CONILL FERNAN O
- [DA] US 5079013 A 19920107 - BELANGER RICHARD A [US]
- [DA] US 3739938 A 19730619 - PAZ N

Cited by

GB2413087A; EP1543751A1; EP1627586A1; NL1027064C2; GB2392628A; GB2361914A; GB2361914B; US6745915B2; WO2006031116A1; WO0048491A1

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0838184 A1 19980429; CA 2219618 A1 19980425; MX 9708223 A 19980830

DOCDB simple family (application)

EP 97308376 A 19971022; CA 2219618 A 19971027; MX 9708223 A 19971024