

Title (en)  
Dual-flush valve for cistern

Title (de)  
Zweimengen-Spülventil für einen Spülkasten

Title (fr)  
Dispositif d'écoulement pour une chasse d'eau à action double

Publication  
**EP 2177675 A1 20100421 (EN)**

Application  
**EP 09173321 A 20091016**

Priority  
AR P080104526 A 20081017

Abstract (en)  
The flush valve comprises an upper valve (3) and a lower valve (7) connected in series and mounted on a tube (2) of different sections. Operating the pushbutton up to half of its way pulls up a filar element (1) fixed to said tube (2) thus moving it and opening the upper valve (3) which makes water pass from the toilet bowl tank through inlet holes (b) and circulation holes (c) into the main tube (4). During the operation, the tube (2) remains guided within a hub-hole (d) in the cover (5) and within the centering device (6). The operation of the pushbutton all the way down, displaces the tube (2) upwards dragging the upper valve (3) fitted to it and the cover (5) to open the lower valve (7) being fixed to the main tube (4) at the lower external end. The displacement is directed by a guide (8) and enables emptying the entire toilet bowl tank. The above mentioned guide (8) and a retainer (10) which closes the passage towards the downpipe (e) are both connected to the lower valve seat. Said seat (9) provides several holes (f) for drainage of the water contained in the toilet bowl tank.

IPC 8 full level  
**E03D 1/14** (2006.01); **E03D 1/34** (2006.01)

CPC (source: EP)  
**E03D 1/145** (2013.01); **E03D 1/34** (2013.01)

Citation (search report)

- [XY] DE 3531165 A1 19870312 - SCHABOS JOSEF DIPL KAUFM [DE]
- [XY] DE 3316894 A1 19841115 - ACKERMANN CLEMENS, et al
- [Y] US 4115882 A 19780926 - PAULUS PAUL
- [Y] DE 3221747 A1 19831215 - GEUER ERNST
- [A] CH 679684 A5 19920331 - PETER NIGGLI

Cited by  
JP2015101927A; ITM10111321A1; CN107002399A; CN112281998A; US10246865B2; WO2013011454A1; US11427995B2; US11933031B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**EP 2177675 A1 20100421**; AR 068903 A1 20091216

DOCDB simple family (application)  
**EP 09173321 A 20091016**; AR P080104526 A 20081017