

Title (en)  
REFILLABLE ROLLERBALL

Title (de)  
NACHFÜLLBARER ROLLERBALL

Title (fr)  
ROLLER RECHARGEABLE

Publication  
**EP 4388930 A3 20240821 (EN)**

Application  
**EP 23217336 A 20231215**

Priority  
• GB 202219563 A 20221222  
• GB 202316904 A 20231103

Abstract (en)  
A device for applying a liquid to a surface is disclosed. The roller ball device is primarily for applying liquid cleansing gel to toilet papers for use in personal cleaning. The device has a ball and a bottle which contains the liquid. A cage forms part of the bottle with a first opening to expose the ball to the liquid gel. There is also a second opening for exposing the ball to the surface onto which the liquid gel is to be applied. An edge of this second opening has a first pair of portions which are located on one side of a meridian of the ball and a second pair of portions of the edge are located on the other side of the meridian. The undulating edge makes it easy to remove the ball to replenish the bottle with cleansing liquid.

IPC 8 full level  
**A45D 34/04** (2006.01); **A47K 10/32** (2006.01)

CPC (source: EP)  
**A45D 34/041** (2013.01); **A45D 40/261** (2013.01); **A47K 2010/3266** (2013.01); **A47K 2010/3286** (2013.01)

Citation (search report)  
• [Y] US 2009289055 A1 20091126 - BAARMAN DAVID W [US], et al  
• [Y] US 2012238926 A1 20120920 - DIEZINGER THOMAS EUGENE JOSEPH [FR]

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

Designated extension state (EPC)  
BA

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4388930 A2 20240626; EP 4388930 A3 20240821**

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