

Title (en)
SEQUENTIALLY ACTIVATED MULTI-DIAPHRAGM FOAM PUMPS, REFILL UNITS AND DISPENSER SYSTEMS

Title (de)
SEQUENTIELL AKTIVIERTE MULTI-MEMBRAN-SCHAUMPUMPEN, NACHFÜLLEINHEITEN UND SPENDERSYSTEME

Title (fr)
POMPES À MOUSSE MULTI-DIAPHRAGMES ACTIVÉES SÉQUENTIELLEMENT, UNITÉS DE REMPLISSAGE ET SYSTÈMES DE DISTRIBUTEUR

Publication
EP 3439521 B1 20221102 (EN)

Application
EP 17717994 A 20170406

Priority

- US 201662319061 P 20160406
- US 201615350190 A 20161114
- US 201615355112 A 20161118
- US 201615356795 A 20161121
- US 201615369007 A 20161205
- US 201715429389 A 20170210
- US 2017026293 W 20170406

Abstract (en)
[origin: EP4133980A1] An exemplary refill unit for a foam dispenser comprises a container for holding foamable liquid, a foam pump secured to the container wherein the foam pump includes a housing, a molded multi-chamber diaphragm wherein the molded multi-chamber diaphragm comprises a liquid pump chamber and three air pump chambers, an inlet valve and an outlet valve. A mixing chamber is included and located downstream of the outlet valve for mixing foamable liquid from the liquid pump chamber with air from each of the three air pump chambers. In addition, a foam cartridge and an outlet for dispensing foam are also included.

IPC 8 full level
A47K 5/12 (2006.01); **B05B 7/00** (2006.01); **B05B 11/00** (2006.01); **F04B 43/02** (2006.01)

CPC (source: EP US)
A47K 5/1208 (2013.01 - EP US); **F04B 13/02** (2013.01 - EP); **F04B 43/026** (2013.01 - EP US); **F04B 43/04** (2013.01 - EP US)

Citation (examination)
JP 2013133716 A 20130708 - OKEN LTD

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 MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 4133980 A1 20230215; AU 2017246462 A1 20181122; AU 2017246462 B2 20221027; EP 3439521 A1 20190213; EP 3439521 B1 20221102

DOCDB simple family (application)
EP 22196906 A 20170406; AU 2017246462 A 20170406; EP 17717994 A 20170406