

Title (en)  
LIQUID CARTRIDGE

Title (de)  
FLÜSSIGKEITSKARTUSCHE

Title (fr)  
CARTOUCHE DE LIQUIDE

Publication  
**EP 3560720 A1 20191030 (EN)**

Application  
**EP 19179472 A 20150701**

Priority  
• EP 19179472 A 20150701  
• EP 15174866 A 20150701

Abstract (en)  
A liquid cartridge (30) comprising a front surface (140), an upper surface (39,141) facing an upward direction (54) when the liquid cartridge (30) is installed in a liquid consuming apparatus, a liquid outlet portion (34) facing a first direction (51) at the front surface (140), a circuit board (64) disposed on the upper surface (39,141) and a liquid detection portion (60) for detecting a state of liquid stored in the liquid cartridge (30) and a locking surface (151) disposed at the upper surface (39,141) and configured to contact a locking portion (145) of a cartridge attaching unit (110) of the liquid consuming apparatus in a second direction (52) opposite to the first direction, wherein the liquid detection portion (60) comprises a light access portion (62) configured to be accessed with light traveling from a first point toward a second point, wherein the light access portion (62) is displaced from the circuit board (64) in the second direction (52), and wherein the locking surface (151) is displaced from the light access portion (62) in the second direction (52).

IPC 8 full level  
**B41J 2/175** (2006.01)

CPC (source: EP)  
**B41J 2/17513** (2013.01); **B41J 2/1752** (2013.01); **B41J 2/17523** (2013.01); **B41J 2/1753** (2013.01); **B41J 2/17553** (2013.01); **B41J 2/17566** (2013.01); **B41J 2002/17573** (2013.01); **B41J 2002/17576** (2013.01)

Citation (applicant)  
• JP 2014019130 A 20140203 - SEIKO EPSON CORP  
• JP 2013049165 A 20130314 - BROTHER IND LTD  
• JP 2005313447 A 20051110 - SEIKO EPSON CORP

Citation (search report)  
• [IY] US 2011234658 A1 20110929 - NOZAWA IZUMI [JP]  
• [Y] EP 2607082 A1 20130626 - BROTHER IND LTD [JP]  
• [Y] JP 2010023458 A 20100204 - CANON KK

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 3112162 A1 20170104; EP 3112162 B1 20190612**; EP 3560720 A1 20191030; EP 3560720 B1 20201104; EP 3785920 A1 20210303; EP 3785920 B1 20220504; EP 4039480 A1 20220810; ES 2738349 T3 20200122; ES 2834646 T3 20210618; PL 3112162 T3 20191129

DOCDB simple family (application)  
**EP 15174866 A 20150701**; EP 19179472 A 20150701; EP 20203256 A 20150701; EP 22164103 A 20150701; ES 15174866 T 20150701; ES 19179472 T 20150701; PL 15174866 T 20150701