

Title (en)  
CLEANING APPARATUS

Title (de)  
REINIGUNGSVORRICHTUNG

Title (fr)  
APPAREIL DE NETTOYAGE

Publication  
**EP 3690380 A4 20201209 (EN)**

Application  
**EP 18866343 A 20181011**

Priority  
• JP 2017198621 A 20171012  
• JP 2018037866 W 20181011

Abstract (en)  
[origin: EP3690380A1] A cleaning apparatus 100 includes: an apparatus body 1; a traveling mechanism 2 disposed in the apparatus body 1 and configured to travel on at least two pipes P included in a pipe group Q; and a cleaning mechanism 3 configured to move downward from the apparatus body 1 and upward to the apparatus body 1 and clean deposits on the surfaces of pipes P below the traveling mechanism 2. The traveling mechanism 2 turns on at least two pipes P with the cleaning mechanism 3 being positioned between at least two pipes P.

IPC 8 full level  
**F28G 15/04** (2006.01); **B08B 9/023** (2006.01); **F22B 37/48** (2006.01); **F28G 1/16** (2006.01); **F28G 3/14** (2006.01)

CPC (source: EP)  
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Citation (search report)  
• [A] US 1594518 A 19260803 - ERVING HATHAWAY  
• [AD] JP 2001336897 A 20011207 - NKK PLANT ENG CORP  
• [A] NL 1032874 C2 20080519 - MOURIK SERVICES B V [NL]  
• [A] DE 102010001651 A1 20110811 - UNIDENSE TECHNOLOGY GMBH [DE]  
• [A] DE 482728 C 19290919 - DAVID KENNEDY, et al  
• See references of WO 2019074040A1

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3690380 A1 20200805; EP 3690380 A4 20201209**; CN 111201417 A 20200526; CN 111201417 B 20211029; JP 2019074228 A 20190516; JP 6837951 B2 20210303; WO 2019074040 A1 20190418

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