

Title (en)  
SANITARY CLEANING DEVICE

Title (de)  
SANITÄRE REINIGUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE NETTOYAGE SANITAIRE

Publication  
**EP 4141179 A1 20230301 (EN)**

Application  
**EP 22191766 A 20220823**

Priority  
JP 2021135850 A 20210823

Abstract (en)  
Provided is a sanitary cleaning device capable of more appropriately stopping heat generation of a heater while enhancing safety against electric leakage from the heater even when dielectric breakdown occurs between water flowing inside and the heater in an instantaneous heat exchanger. Provided is a sanitary cleaning device including: a connecting portion including a first power supply terminal and a second power supply terminal; a heat exchanger including a ground electrode that grounds water flowing inside, and a heater unit including a heater electrically insulated from the water flowing inside; a jet nozzle that jets cleaning water; a switching element provided on a power supply path between the other end of the heater and the second power supply terminal; a control unit that controls supply of AC power to the heater by switching of the switching element; a first temperature fuse provided on a power supply path between one end of the heater and the first power supply terminal; and a second temperature fuse provided on the power supply path between the other end of the heater and the second power supply terminal.

IPC 8 full level  
**E03D 9/08** (2006.01); **H05B 1/02** (2006.01)

CPC (source: EP)  
**E03D 9/08** (2013.01); **H05B 1/025** (2013.01)

Citation (applicant)  
JP 2018031201 A 20180301 - TOTO LTD

Citation (search report)  
• [X] JP 2013068048 A 20130418 - AISIN SEIKI  
• [A] JP 2018100819 A 20180628 - AISIN SEIKI  
• [A] JP 2015158103 A 20150903 - PANASONIC IP MAN CORP  
• [A] CN 202809791 U 20130320 - YANG PENGBIN, et al  
• [A] JP 2001123509 A 20010508 - HITACHI CHEMICAL CO 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

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4141179 A1 20230301**; CN 115711479 A 20230224; JP 2023030624 A 20230308

DOCDB simple family (application)  
**EP 22191766 A 20220823**; CN 202210932517 A 20220804; JP 2021135850 A 20210823