

Title (en)
Sanitary cleaning apparatus.

Title (de)
Sanitärreinigungsvorrichtung.

Title (fr)
Dispositif de nettoyage sanitaire.

Publication
EP 0615027 A1 19940914 (EN)

Application
EP 94103348 A 19940305

Priority
• JP 4768693 A 19930309
• JP 5683293 A 19930317
• JP 22107193 A 19930906

Abstract (en)
A sanitary cleaning apparatus comprises plurality of cleaning water jetting openings (45a,45b) on a nozzle (37), and the axes of those jetting openings (45a,45b) intersect with each other between a jetting surface (46) of the nozzles (37) and a region (A) to be cleaned. The sanitary cleaning apparatus provides various cleaning patterns by giving turbulence to the jetting flow, by mixing air in the water, and by changing distribution ratio of jetting flows from different jetting openings. <IMAGE>

IPC 1-7
E03D 9/08

IPC 8 full level
E03D 9/08 (2006.01)

CPC (source: EP KR)
E03D 9/08 (2013.01 - EP KR)

Citation (search report)
• [YA] US 4761837 A 19880809 - TAKEDA HISANOBU [JP]
• [A] FR 2297295 A1 19760806 - MFB NEUWERK MECH FENSTER [DE]
• [A] FR 2334791 A1 19770708 - ROBERTS ARTHUR [CA]
• [YA] PATENT ABSTRACTS OF JAPAN vol. 14, no. 271 (M - 983)<4214> 12 June 1990 (1990-06-12)
• [A] PATENT ABSTRACTS OF JAPAN vol. 14, no. 375 (M - 1010)<4318> 14 August 1990 (1990-08-14)
• [A] PATENT ABSTRACTS OF JAPAN vol. 14, no. 121 (M - 946)<4064> 7 March 1990 (1990-03-07)

Cited by
EP3231950A3; EP2918740A4; EP2312068A4; US8261377B2; WO2007004790A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0615027 A1 19940914; EP 0615027 B1 19970813; CA 2117111 A1 19940910; CA 2117111 C 20000919; CN 1089840 C 20020828; CN 1103917 A 19950621; DE 69404879 D1 19970918; DE 69404879 T2 19980102; KR 0152683 B1 19981015; KR 940021848 A 19941019; TW 253005 B 19950801

DOCDB simple family (application)
EP 94103348 A 19940305; CA 2117111 A 19940307; CN 94102468 A 19940309; DE 69404879 T 19940305; KR 19940004444 A 19940308; TW 83101690 A 19940228