

Title (en)  
Modular shoe scraper

Title (de)  
Modularer Fussabstreifer

Title (fr)  
Paillasson modulaire

Publication  
**EP 1166709 A3 20030319 (DE)**

Application  
**EP 01115232 A 20010622**

Priority  
ES 200001674 U 20000622

Abstract (en)  
[origin: EP1166709A2] A free piston (104) positioned between an entrance pipe (1) and an exit pipe (21) to the brine supply chamber (5) ensures that the brine circulates through this chamber in one direction. A hydraulic damping device is used in a reverse osmosis desalination apparatus containing supply chambers which are pressurized in a continuous kinetic cycle. The component ensuring that brine circulates through the supply chamber in one direction comprises a free piston positioned between an entrance pipe and an exit pipe. The piston stroke is limited by inlet and outlet stops (106, 107), which prevent the piston from reaching either the entrance or exit pipe. Independent claims are also included for: (a) a second hydraulic damping device comprising a membrane; and (b) a third hydraulic damping device comprising a bypass valve.

IPC 1-7  
**A47L 23/22**; E04F 15/10; E04F 15/02

IPC 8 full level  
**A47L 23/22** (2006.01); **A47L 23/24** (2006.01); **E04F 15/10** (2006.01)

CPC (source: EP US)  
**A47L 23/24** (2013.01 - EP US); **E04F 15/02194** (2013.01 - EP US); **E04F 15/082** (2013.01 - EP US); **E04F 15/10** (2013.01 - EP US)

Citation (search report)

- [A] DE 3725391 A1 19890209 - GUMMI GEGGUS GUMMIMATTENFABRIK [DE]
- [A] WO 9912465 A1 19990318 - MILLIKEN DENMARK [DK], et al
- [DA] ES 252649 U 19810501

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