

Title (en)  
Tube cleaner for removing hard deposits

Title (de)  
Reinigungsgerät zur Entfernung von harten Ablagerungen in Rohren

Title (fr)  
Outil de nettoyage pour enlever des dépôts durs dans les tuyaux

Publication  
**EP 0698423 B1 19990113 (EN)**

Application  
**EP 95305517 A 19950808**

Priority  
US 28713594 A 19940808

Abstract (en)  
[origin: EP0698423A1] A tube cleaner (1) for removing thin hard deposits from the inner surface of a tube (12) has a shaft (2) with a nose portion (3) and tail portion (4), and two or three scraper elements (6, 6', 6'') along the shaft (2). Each scraper element is a one piece element having a base portion (7) and a plurality of outwardly biased rearwardly extending fingers (8) terminating as blade portions (9). Adjacent fingers (8) are of different lengths and the blade portions (9) make substantially point-to-point contact with the tube inner wall surface (14) as the scraper element (6, 6', 6'') is forced through the tube (12). <MATH>

IPC 1-7  
**B08B 9/04**

IPC 8 full level  
**B08B 9/04** (2006.01); **B08B 9/043** (2006.01); **F28G 1/12** (2006.01)

CPC (source: EP KR)  
**B08B 9/02** (2013.01 - KR); **B08B 9/0557** (2013.01 - EP); **F28G 1/12** (2013.01 - EP)

Cited by  
EP0901843A3; CN102688871A; US6691446B2; CN105642621A; EP0901842A3; CN112620382A; CN105032870A; US2024091827A1; WO2011098112A2; US9375765B1; DE102010010280A1; DE202010017786U1; US9089884B2; US9505040B2; DE102010052517A1; DE202010017794U1; DE102010010281A1; DE202010017785U1; US9332826B2

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