

Title (en)

Scraper for removing ice from surfaces

Title (de)

Eiskratzvorrichtung zum Entfernen von Eis von einer Oberfläche

Title (fr)

Grattoir pour enlever la glace sur une surface

Publication

EP 1199021 A3 20030611 (DE)

Application

EP 01125050 A 20011022

Priority

DE 10052281 A 20001020

Abstract (en)

[origin: EP1199021A2] The ice scraper has a handle portion (12) containing batteries (13) and a working area (16) comprising a sharp cutting edge (18) and an embedded heating element (20) close to the edge.

IPC 1-7

A47L 1/16

IPC 8 full level

A47L 1/16 (2006.01)

CPC (source: EP)

A47L 1/16 (2013.01)

Citation (search report)

- [XY] US 3935425 A 19760127 - WEISSBERGER DAVID, et al
- [X] US 5357646 A 19941025 - KIM DAVID H J [CA]
- [X] FR 2591881 A1 19870626 - FERRARI FRANCIS [FR]
- [X] US 5973294 A 19991026 - SCHATT MICHAEL [US], et al
- [X] FR 2315895 A1 19770128 - GONTARD GEORGES [FR]
- [A] US 2719905 A 19551004 - LOOTENS RALPH H
- [A] US 2700096 A 19550118 - CLEMENTS JAMES D
- [Y] US 4442341 A 19840410 - LESQUEREAUX YVAN [CH], et al
- [Y] PATENT ABSTRACTS OF JAPAN vol. 018, no. 504 (E - 1608) 21 September 1994 (1994-09-21)

Cited by

EP2285631A4; IT201700066519A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1199021 A2 20020424; EP 1199021 A3 20030611; DE 10052281 A1 20020516; DE 10052281 C2 20021010

DOCDB simple family (application)

EP 01125050 A 20011022; DE 10052281 A 20001020