

Title (en)
A NOZZLE FOR A SNOWMAKING APPARATUS, A SNOW LANCE HEAD AND A METHOD FOR PRODUCING A SLITTED HOLLOW CONE SPRAY

Title (de)
DÜSE FÜR EINE SCHNEEHERSTELLUNGSVORRICHTUNG, SCHNEELANZENKOPF UND VERFAHREN ZUR ERZEUGUNG EINER GESCHLITZTEN HOHLKEGELSPRÜHUNG

Title (fr)
BUSE POUR APPAREIL DE FABRICATION DE NEIGE, TÊTE DE LANCE À NEIGE ET PROCÉDÉ POUR PRODUIRE UNE PULVÉRISATION CONIQUE CREUSE FENDUE

Publication
EP 3614077 A1 20200226 (EN)

Application
EP 18190217 A 20180822

Priority
EP 18190217 A 20180822

Abstract (en)
A nozzle (1) for a snowmaking apparatus for producing a slitted hollow cone spray (2) wherein the slitted hollow cone spray (2) is formed by a spray curtain (4) of water droplets (6), said spray curtain (4) having the shape of a hollow cone with a slit (8) that forms a lateral air path (10) into a hollow cone interior (14); the nozzle (1) comprises a water swirler (30) configured to receive and to guide a flow of water (80) such that a flow of swirling water (82) with a rotational motion is produced, a spray outlet (42) configured to receive the flow of swirling water (82) from the water swirler (30) and to eject it through an orifice (40), wherein the orifice (40) is shaped so as to define a flow diverter (44) configured to locally disturb the rotational motion as the water is being ejected, whereby the spray outlet (42) is configured to eject a spray curtain (4) of water droplets (6) in the shape of a conical surface with a lateral slit (8) formed by the flow diverter (44).

IPC 8 full level
F25C 3/04 (2006.01); **B05B 1/26** (2006.01)

CPC (source: EP)
B05B 1/06 (2013.01); **B05B 1/341** (2013.01); **F25C 3/04** (2013.01); **F25C 2303/048** (2013.01)

Citation (search report)

- [XY] US 3302399 A 19670207 - ANTHONY TINI, et al
- [X] EP 1486257 A2 20041215 - KYORITSU GOKIN CO LTD [JP], et al
- [X] US 1788492 A 19310113 - NELSON LEWEN R
- [Y] EP 0855564 A1 19980729 - LEITNER SPA [IT]
- [A] WO 2007100857 A2 20070907 - VORTEX GROUP INC [US], et al
- [A] WO 9204585 A1 19920319 - PINNACLE INNOVATIONS [US]
- [A] EP 1386668 A1 20040204 - YORK NEIGE [FR]
- [A] JOSEPH J SHAY ET AL: "Atomization of Liquids With Mechanical Breakup Actuators", AEROSOL AGE,, no. 12, 1 December 1975 (1975-12-01), pages 52 - 60, XP001443656

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

DOCDB simple family (publication)
EP 3614077 A1 20200226; EP 3614077 B1 20230607; EP 3614077 C0 20230607

DOCDB simple family (application)
EP 18190217 A 20180822