

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
29 April 2021 (29.04.2021)



(10) International Publication Number
WO 2021/081085 A1

(51) International Patent Classification:
C01B 13/11 (2006.01) C01B 13/10 (2006.01)
C01B 13/00 (2006.01)

(21) International Application Number:
PCT/US2020/056645

(22) International Filing Date:
21 October 2020 (21.10.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
16/659,512 21 October 2019 (21.10.2019) US

(71) Applicant: EVOQUA WATER TECHNOLOGIES LLC
[US/US]; 210 SIXTH AVENUE, SUITE 3300, PIT-
TSBURGH, Pennsylvania 15222 (US).

(72) Inventor: DEMPSTER, Phillip Tinsley; 1626 DEAR-
DORFF LANE, CONCORD, California 94519 (US).

(74) Agent: WILKINS, Frederick; 10 TECHNOLOGY
DRIVE, LOWELL, Massachusetts 01851 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,
SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,

(54) Title: ELECTRICAL DISCHARGE CELL FOR GENERATING OZONE

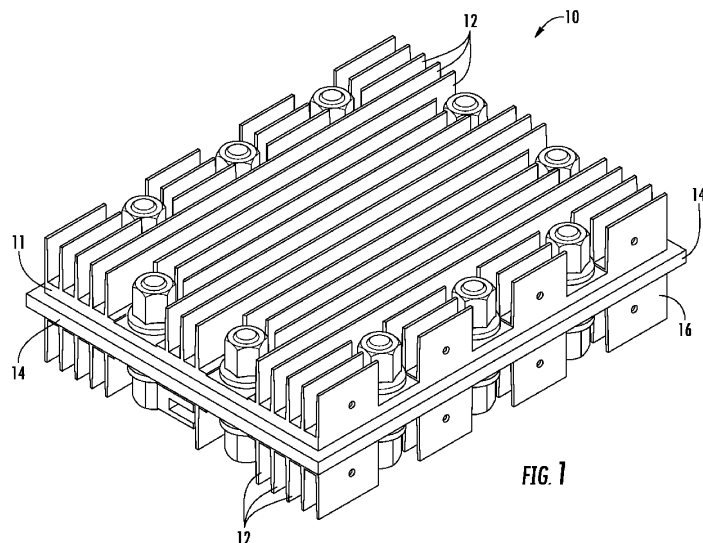


FIG. 1

(57) Abstract: An electrical discharge ozone generation cell has first and second electrode base plates which are separated by a non-conductive flat spacer plate. Within a central opening in the spacer plate is fitted an electrode plate in close contact with the first electrode base plate. A dielectric plate in close contact with the second electrode base plate and with the spacer plate helps define a gas discharge chamber with the interior edges of the spacer plate and the electrode plate. Gaskets on the two sides of the spacer plate around the central opening displaced away from the interior edges of the spacer plate ensure a gas seal for the electrical discharge chamber.

[Continued on next page]

MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*