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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
06 July 2023 (06.07.2023)

WIPO | PCT

(10) International Publication Number
WO 2023/125693 A1

(51) International Patent Classification:
A61N 5/06 (2006.01)

(21) International Application Number:
PCT/CN2022/142916

(22) International Filing Date:
28 December 2022 (28.12.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
202111624718.4 28 December 2021 (28.12.2021) CN
202210886242.X 26 July 2022 (26.07.2022) CN

(71) Applicant: **DANYANG HUICHUANG MEDICAL EQUIPMENT CO., LTD.** [CN/CN]; Danyang High-Tech Innovation Park Phase I, South 3rd Ring Road, Danyang, Zhenjiang, Jiangsu 212300 (CN).

(72) Inventor: **WANG, Daifa**; Danyang High-Tech Innovation Park Phase I, South 3rd Ring Road, Danyang, Zhenjiang, Jiangsu 212300 (CN).

(74) Agent: **KINGSOUND & PARTNERS**; 11/F, Block B, KingSound International Center, 116 Zizhuyuan Road, Haidian District, Beijing 100097 (CN).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, 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, CV, 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, MC, ME, 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).

Published:
— *with international search report (Art. 21(3))*

(54) Title: PHOTOTHERAPY DEVICE AND PHOTOTHERAPY APPARATUS FOR CEREBRAL FUNCTIONAL RELATED DISEASE

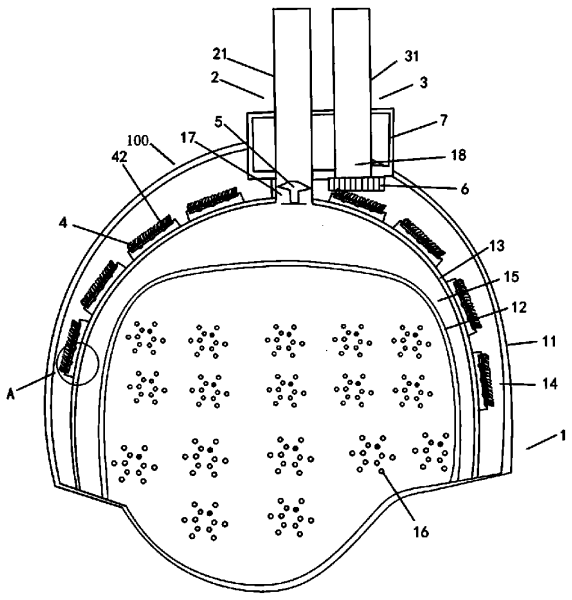


FIG. 1

(57) Abstract: The embodiments of the disclosure provide a phototherapy device and a phototherapy apparatus for cerebral functional related diseases. The phototherapy device comprises a helmet, irradiation assembly and a cooled gas supply mechanism. The helmet includes a housing assembly, inner side of which forms a spaced cavity with scalp of a user and is provided with a first gas inlet, the spaced cavity is constructed to form gas pathway between the first gas inlet and the scalp of the user. The irradiation assembly is mounted to the housing assembly with its light emergent side located to the inner side of the housing assembly. The cooled gas supply mechanism is interconnected to the first gas inlet through the housing assembly and supplies the cooled gas for passing through the first gas inlet and the spaced cavity sequentially and being blown toward the scalp of the user. The above light therapy device can cool the head of the user during the treatment process, improve the user's experience, enable the user to accept treatment for a longer time, and improve the phototherapy effect and the safety of the device.

WO 2023/125693 A1