

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
26 December 2019 (26.12.2019)



(10) International Publication Number  
**WO 2019/245976 A1**

(51) International Patent Classification:

*B65D 88/74* (2006.01) *B65D 88/12* (2006.01)  
*B65D 90/48* (2006.01) *B65D 90/04* (2006.01)

(21) International Application Number:

PCT/US2019/037501

(22) International Filing Date:

17 June 2019 (17.06.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/686,410 18 June 2018 (18.06.2018) US

(71) Applicant: **CRYOPORT, INC.** [US/US]; 17305 Daimler Street, Irvine, California 92614 (US).

(72) Inventor: **BOLLINGER, Bret**; 4337 Via Del Obispo, Yorba Linda, California 92886 (US).

(74) Agent: **HUAH, Andrew D.** et al.; Snell & Wilmer LLP, One Arizona Center, 400 East Van Buren St., Suite 1900, Phoenix, Arizona 85004-2202 (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, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, 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))*

**Published:**

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

(54) Title: CRYOLINER

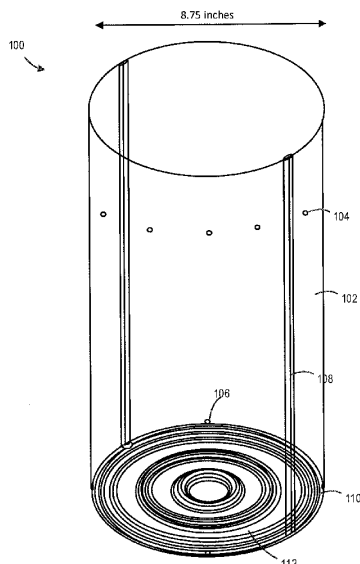


FIG. 1A

(57) Abstract: Methods, systems, devices and/or apparatuses for a protective liner that protects products and/or commodities from cross-contamination during transport and/or storage using a cryogenic shipping container. The protective liner lines a shipping container, such as a dewar. The protective liner is positioned within the shipping container. The protective liner includes one or more tabs positioned on a perimeter of the protective liner. The one or more tabs are configured to interlock with a notch on an inside surface of the shipping container. The protective liner includes a clearance channel on a side of the protective barrier and configured to guide a temperature sensor lead wire.



WO 2019/245976 A1