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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
3 June 2010 (03.06.2010)

PCT

(10) International Publication Number
WO 2010/062311 A3

(51) International Patent Classification:
E06B 5/16 (2006.01) *E06B 3/78* (2006.01)
E06B 3/76 (2006.01) *A62C 2/06* (2006.01)

(21) International Application Number:
PCT/US2009/005750

(22) International Filing Date:
22 October 2009 (22.10.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/258,698 27 October 2008 (27.10.2008) US

(71) Applicants *(for all designated States except US)*: **BAYER MATERIALSCIENCE LLC** [US/US]; 100 Bayer Road, Pittsburgh, PA 15205-9741 (US). **3-FORM INC./ HUNTER DOUGLAS** [US/US]; 2300 South 2300 West, Salt Lake City, UT 84119 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LORENZO, James, M.** [US/US]; 4014 Claridon Drive, Mars, PA 16046 (US). **PYLES, Robert, A.** [US/US]; 432 Galway Drive, Bethel Park, PA 15102-2306 (US). **GOODSON, Raymond, L.** [US/US]; 3008 Fallintine Road, Sandy, UT 84093 (US).

(74) Agents: **MROZINSKI, John, E. Jr:** et al.; Bayer Materialscience LLC, 100 Bayer Road, Pittsburg, PA 15205-9741 (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, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, 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))*

(88) Date of publication of the international search report:
2 September 2010

(54) Title: HIGH-ENERGY IMPACT ABSORBING POLYCARBONATE MOUNTING METHOD

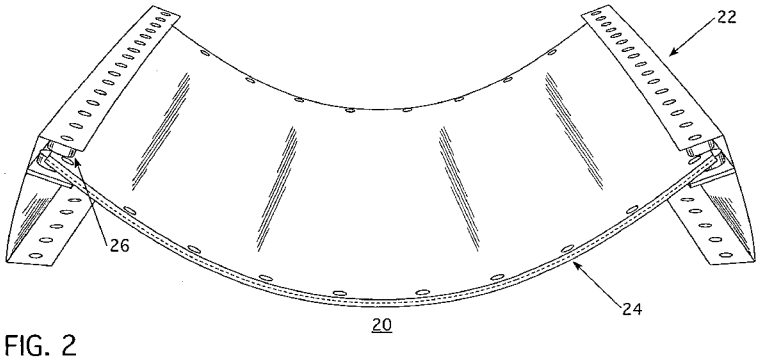


FIG. 2

(57) Abstract: The present invention provides a bi-active method of mounting a monolithic polycarbonate sheet or a laminate in a semi -rigid metallic framing system along two parallel sides of a rectangular shaped sheet or laminate with the two shorter parallel sides being unconstrained. In the case of a square shaped sheet, two parallel sides are supported in the semi -rigid frame, and the other two parallel sides are unconstrained. The semi-rigid frame utilizes cylindrically shaped hardware (i.e., bolts, rivets, studs, etc.) to hold the sheet or laminate. The semi-rigid frame is designed, via section and material properties, to flex and hinge about fixed mounting points along the length of the frame.

WO 2010/062311 A3