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(21) International Application Number: PCT/US98/22431 (22) International Filing Date: 22 October 1998 (22.10.98) (30) Priority Data: 08/963,955 4 November 1997 (04.11.97) US (71) Applicant (for all designated States except US): BUFFALO MOLDED PLASTICS, INC. [US/US]; c/o Cranbrook Partners Limited, 1134 East Big Beaver Road, Troy, MI 48083 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): SOUDERS, John, D. [-/US]; 546 N. Summit Road, Meadville, PA 16335 (US). ARETZ, Peter, J. [-/US]; 5517 Woods Drive, Edinboro, PA 16412 (US). (74) Agent: KENAGA, Michael, L.; Rudnick & Wolfe, P.O. Box 64807, Chicago, IL 60664-0807 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: MOLDED POLYOLEFIN AND POLYPHENYLOXIDE PRODUCTS AND METHOD FOR PRODUCTION		
(57) Abstract		
Polyolefin and polyphenyloxide products (8) such as products made using expanded polystyrene (EPS) or expanded polypropylene (EPP). A "foil" or "skin" (18) of vinyl or other suitable decorative material is associated with the product to achieve a pleasing appearance and an otherwise satisfactory exterior surface. To make the product, the skin is positioned over the cavity (14) of a female mold part (10). The mold is closed and, with or without vacuum assistance, the skin is brought into contact with the female mold surfaces (22) during introduction of the plastic. This plastic is introduced in the form of small beads selected from the group consisting of polyolefin and polyphenyloxide beads which have been pre-expanded to a density reduction in the order of 75 %. Air pressure is used to feed the beads into the mold cavity (14) and steam is injected to soften the beads and to cause bonding thereof into an integral mass. In addition, the outer layer of beads is bonded to the foil (18) whereby a one-piece part is removed from the mold. The invention also contemplates the addition of a frame (30) structure to the one-piece finished part to facilitate attachment to a sheet metal door or other support. The frame (30) may be positioned in association with the mold parts (10) using fasteners of some sort. The frame (30) is then integrated with the plastic part during a molding step and the part can then be readily attached to a sheet metal door or the like.		