

86 9701367-6

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A45C 13/04, B29C 51/04, 51/10	A1	(11) International Publication Number: WO 96/39892 (43) International Publication Date: 19 December 1996 (19.12.96)
(21) International Application Number: PCT/US96/10019 (22) International Filing Date: 5 June 1996 (05.06.96) (30) Priority Data: 08/481,962 7 June 1995 (07.06.95) US (71) Applicant: SAMSONITE CORPORATION [US/US]; 11200 East Forty-Fifth Avenue, Denver, CO 80239 (US). (72) Inventors: YOUNESSIAN, Elliot; 3255 C West 98th Avenue, Westminster, CO 80030 (US). KAPUSHION, Joseph; 12755 Forest Street, Thornton, CO 80241 (US). BROMLEY, Robert; Unit H, 557 Burbank Street, Broomfield, CO 80020 (US). (74) Agent: BAKER, Rod, D.; Samsonite Corporation, 11200 East Forty-Fifth Avenue, Denver, CO 80239 (US).	(81) Designated States: BG, BR, CN, CZ, EE, GE, HU, JP, KR, LT, LV, MK, MX, NO, PL, RO, SG SI, SK, UA, UZ, VN, Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>With amended claims.</i>	

(54) Title: DIFFERENTIAL PRESSURE FORMED LUGGAGE WITH MOLDED INTEGRATED FRAME

(57) Abstract

The invention relates to hard sided luggage shells (40, 80) and other containers manufactured using vacuum forming or pressure forming of thermoplastics. A process for making shells (40, 80) and containers with integrally molded frames (42, 44, 82, 84) is disclosed, and products made by the method. A method of manufacturing differential pressure formed containers with framed openings, but without the need to attach a separate frame element to the molded shell (40, 80). A process also is disclosed for reducing the undesirable stretching of shell material (216) that occurs during differential pressure forming, particularly the thinning of corner portions of the shell (40, 80) or container. The process of the invention more efficiently utilizes the thermoplastic material (216) by moving material from otherwise offal portions (222) into the molded product. An improved method for severing the offal material (222) from the final product is disclosed.

