

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number
WO 2004/108541 A3

(51) International Patent Classification⁷: **B65D 88/00**,
6/16, 6/24, 8/14

(21) International Application Number:
PCT/US2004/016573

(22) International Filing Date: 26 May 2004 (26.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/455,592 5 June 2003 (05.06.2003) US

(71) Applicant and

(72) Inventor: **SHUERT, Lyle, H.** [US/US]; 70 Kingsley
Manor Drive, Bloomfield Hills, MI 48304 (US).

(74) Agents: **WOOD, Donald, L.** et al.; Young & Basile, P.C.,
3001 W. Big Beaver, Suite 624, Troy, MI 48084-3107 (US).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

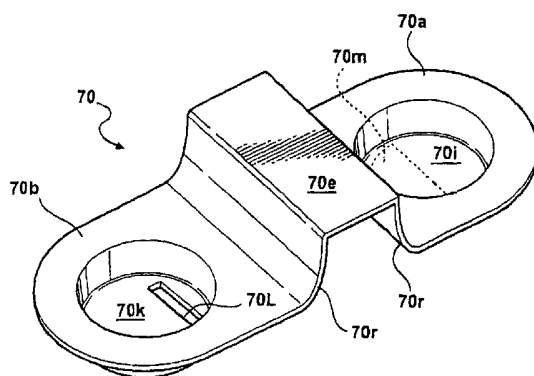
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
20 October 2005

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: REINFORCING CLIP FOR A CORRUGATED SLEEVE



(57) **Abstract:** A plastic reinforcing clip for use with a container of the type including a corrugated sleeve adapted to be removably attached to a plastic pallet or base member by the use of sliding latch members coacting with circular apertures in the lower peripheral edge portion of the sleeve. The reinforcing clip structure is formed of a single piece of molded plastic material and includes an outer annular planar portion, an inner annular planar portion, an outer cup-shaped liner portion, an inner cup-shaped liner portion, and a central hinge portion. In use, the central hinge portion is positioned under and along the lower edge of the sleeve beneath an aperture in the sleeve and the inner and outer planar portions are swung upwardly about live hinges provided between the hinge portion and the inner and outer planar portions. As the inner and outer planar portions are swung upwardly and inwardly, the cup-shaped liner portions enter the slot from the inner and outer faces of the sleeve. A circular annular wall section of the outer liner portion is seated within and engages an outer annular portion of the circular aperture edge with a planar base section of the liner portion positioned centrally within the aperture and a circular annular wall section of the inner liner portion is seated within and engages an inner annular portion of the circular aperture with a planar base section of the inner liner portion abutting the base section of the outer liner portion. The abutting planar base sections are suitably secured together as by stabling to fixedly secure the clip on the sleeve to preclude damage to the sleeve in response to repeated actuation of the latch members.



WO 2004/108541 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/16573

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B65D 88/00, 6/16, 6/24, 8/14

US CL : 220/1.5, 4.28, 4.33, 6.22; 206/386, 600; 229/198.2, 198.3; 24/458, 519, 499, 564, 684

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 220/1.5, 4.28, 4.33, 6.22; 206/386, 600; 229/198.2, 198.3; 24/458, 519, 499, 564, 684

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,936,451 A (SHUERT) 26 June 1990, see entire document.	1-4,6,8-11,13,15-18,20,22-25,27,29-32

Y		
Y	US 5,109,985 A (ROSE) 05 May 1992, see entire document.	7, 14, 21, 28
Y	US 5,123,541 A (GIANNINI ET AL.) 23 June 1992, see entire document.	3,4,9-11,13,17,18,20,24,25,31,32
A	US 5,862,917 A (NOBLE ET AL.) 26 January 1999, see entire document.	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

27 June 2005 (27.06.2005)

Date of mailing of the international search report

22 AUG 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

linda sholl

Telephone No. (571) 272-4391