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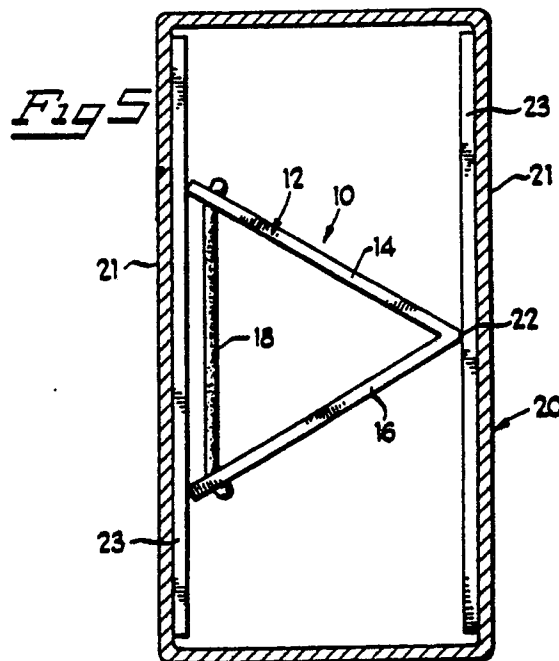
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(54) **Soft bag and expander.**

(57) An expander for insertion into and expansion of a soft bag (20, 40, 302) comprising a device (10, 11, 13, 15, 136, 137, 200, 250, 300, 350) which is folded or collapsed to a flat state or spread apart to an expanded state. The soft bag is collapsed to a compact form in the flat state for shipment. In the expanded position, the bag is expanded to give the appearance that it is filled. Some embodiments use a resilient member (18, 38, 146, 230, 280, 281, 330, 380) to automatically urge the device from a flat position to its expanded position when compressive forces are removed from the bag. Other forms use a cord (72, 98, 150) for manually moving the expander device into its bag-expanding position. To provide for a greater extent of expansion in relation to the length of the device in the flat position, an expanding device (200, 250, 300, 350) having four sequentially arranged sections (211-214, 261-264, 311-314, 361-364), each of which is articulatable with respect to each adjacent section is provided in some embodiments. Expansion of a cylindrical bag (302) is facilitated by a generally rigid insert (333, 334, 382) in certain embodiments that is articulatable to better conform to the curved shape of the side portions.

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EUROPEAN SEARCH REPORT

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| DOCUMENTS CONSIDERED TO BE RELEVANT | | | EP 90306524.1 |
|---|---|--|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl.5) |
| A | <u>GB - A - 1 590 632</u> (ZOLAND) * Fig. 1-4 * -- | 1 | A 45 C 7/00 |
| A | <u>FR - A - 1 073 581</u> (DALLIOUX) * Fig. 1-6 * -- | 1 | |
| A | <u>US - A - 2 798 579</u> (FOX) * Fig. 1-7 * -- | 1 | |
| A | <u>GB - A - 580 515</u> (ROSE) * Fig. 1-6 * -- | 1 | |
| A | <u>AT - B - 166 343</u> (FRÖHLICH) * Fig. 1-4 * -- | 1 | |
| D,A | <u>US - A - 4 077 451</u> (ZOLAND) * Fig. 1-4 * -- | 1 | TECHNICAL FIELDS SEARCHED (Int. Cl.5) |
| D,A | <u>US - A - 4 141 399</u> (ZOLAND) * Fig. 1-5 * -- | 1 | A 45 C 7/00 A 45 C 3/00 A 45 C 5/00 |
| D,A | <u>US - A - 4 142 564</u> (ZOLAND) * Fig. 1-6 * ----- | 1 | |
| The present search report has been drawn up for all claims | | | |
| Place of search VIENNA | | Date of completion of the search 30-11-1990 | Examiner KAMMERER |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | | | |