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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: CARPULE WARMER AND DISPENSER

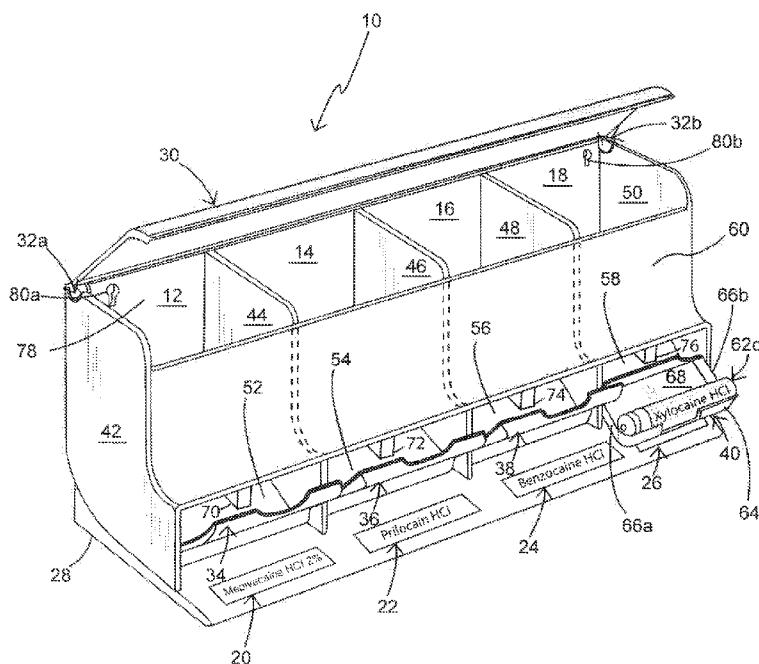


FIG. 1

(57) Abstract: An apparatus for storing, warming and manually individually dispensing elongated cylindrical vials having different contents, while minimizing error and clutter, is described. Vials are stored in bins, which have manually operated dispensing members. Each bin may be separately heated using small incandescent bulbs or other heating elements. Adjustable temperature sensors may be placed in each bin to permit separate temperature control, and provide a high-temperature cutoff. One embodiment of the apparatus may be wall mounted to relieve congestion on horizontal surfaces. Another embodiment is suitable for table use, and has a reduced profile for clutter reduction.

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- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US16/39345

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A47F 1/10, 3/026; A61J 1/16; B65D 83/02, 83/20 (2016.01)

CPC - A47F 1/10, 3/001, 3/02; A61J 1/06, 1/16; B65D 83/0481

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)

IPC(8) - A47F 1/04, 1/08, 1/10, 3/02, 3/024, 3/026; A61J 1/04, 1/06, 1/16; B65D 83/00, 83/02, 85/00, 85/20 (2016.01); CPC - A47F 1/04, 1/08, 1/10, 3/001, 3/02; A61B 50/30; A61J 1/05, 1/06, 1/062, 1/065, 1/067, 1/16; 7/0076, 7/0084; B65D 83/00, 83/0083, 83/02, 83/0481

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)

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); Google; Google Scholar; EBSCO; Carpule*, cartridge*, vial, ampule*, ampoule*, warm*, heat*, temp*, bin, receptacle*, compartment*, chamber*, stor*, container*, wall*, partition*, panel*, barrier*, divider*, ramp*, slop*, open*, outlet*, pass*, channel*, aperture*, gate*, door*, top, cover*, lid, power*, electr*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,526,292 A (WAXMAN, J.) 02 July 1985; entire document	1-9
A	US 5,482,183 A (BEAL, J. R. et al.) 09 January 1996; entire document	1-9
A	US 2007/0074668 A1 (ZUTIS, C. W. et al.) 05 April 2007; entire document	1-9
A	JP 2002032843 A (FUJINO, H. et al.) 31 January 2002; entire document	1-9
A	US 4,860,922 A (MALSERVISI, W. et al.) 29 August 1989; entire document	1-9
A	US 1,699,608 A (COOKE, G. S.) 22 January 1929; entire document	1-9



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

"E" earlier application or patent but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

29 August 2016 (29.08.2016)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US16/39345

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

-Continued Within the Next Supplemental Box-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-9

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/US16/39345

-Continued from Box No. III Observations where unity of invention is lacking-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-9 are directed toward an apparatus for storing, warming, and manually individually dispensing elongated cylindrical vials comprising a vertical guide member, a ramp attached to a lower portion of said rear wall, and a manually pivotable vial dispensing tray.

Group II: Claims 10-17 are directed toward an apparatus for storing, warming, and manually individually dispensing elongated cylindrical vials comprising a first ramp having one end attached to said front wall and a second free end, and a second ramp disposed below said first ramp, and a manually operated vial dispensing actuator adapted to move in the vertical direction.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group I includes a vertical guide member protruding into said at least one bin from the lower portion of the inner surface of said front wall, and extending into the opening thereof; a ramp attached to a lower portion of said rear wall, wherein the ramp has an outside and a bin side, wherein said ramp and said vertical guide member form a channel having an inlet facing the bin volume and an outlet facing the opening in said front wall, and through which said vials slide or roll due to gravity; and a manually pivotable vial dispensing tray having an inner portion and an outer portion and disposed in the opening of said front wall of said at least one bin, said dispensing tray comprising: a vial blocking inner portion for reversibly blocking movement of said vials out of the channel; a bent section pivotably attached to each of said side walls, the bent section having a flanking member on opposing sides thereof for guiding said vials along the bent section, the bend in the bent section disposed in the region of the pivotable attachment; and a cup portion for holding one of said vials.

Group II includes a first ramp on which said vials slide or roll due to gravity, having one end thereof attached to said front wall in a lower portion thereof and above the opening thereof, and a second free end, said first ramp being directed into said at least one bin at a downward angle from said front wall to said rear wall, and having a length such that there is an opening; a second ramp on which said vials slide or roll due to gravity and disposed below said first ramp, having one end thereof attached to said rear wall in a lower portion thereof, said second ramp being directed into said at least one bin at a downward angle from said rear wall to said front wall, and having a length such that said second ramp exits said first wall through the opening therein terminating in an upturned portion for retaining a vial; a manually operated vial dispensing actuator operatively disposed in the vicinity of said rear wall and adapted to move in the vertical direction, said actuator capturing a single vial when disposed in a first position, and releasing the captured vial onto said second ramp when disposed in a second position, below the first position; wherein, said captured vial exits said at least one bin through the opening in said front wall and is retained in the upturned position of said second ramp when said actuator is disposed in the second position; and at least one heating element disposed above said second ramp.

The common technical features of Groups I-II are an apparatus for storing, warming, and manually individually dispensing elongated cylindrical vials having different contents, comprising at least one bin comprising two vertical spaced-apart side walls having a spacing suitable for permitting said vials to be horizontally disposed therebetween; a vertical front wall having an opening in a lower portion thereof, and an inner surface; a vertical rear wall; and a ramp directed into said at least one bin, wherein the ramp has holes therein for permitting heat to pass therethrough and vial slide or roll due to gravity, and wherein said two vertical side walls, said vertical front wall, said vertical rear wall, and said ramp form a bin volume; a manually operated vial dispensing actuator; a top for covering said at least one bin; at least one heating element for maintaining said at least one bin at a chosen temperature; and an electrical power source for providing power to said at least one heating element.

These common features are disclosed by US 4,526,292 A (WAXMAN). Waxman discloses an apparatus (10; figure 1) for storing, warming, and manually individually dispensing elongated cylindrical vials having different contents, comprising at least one bin (40; figure 2) comprising two vertical spaced-apart side walls (as shown by vertical side wall at top portion 18 of chest 10 and wall 42 (second vertical side wall); figures 1-3; column 3, lines 15-30) having a spacing suitable for permitting said vials (12) to be horizontally disposed therebetween (as shown; figures 1 and 3; column 3, lines 15-30); a vertical front wall having an opening in a lower portion thereof, and an inner surface (shown via vertical front wall of chest 10, proximate dispensing mechanisms 66, 68, having an opening and inner surface; figures 1-2; column 3, lines 15-30); a vertical rear wall (44; figure 3; column 3, lines 15-30); and a ramp (54) directed into said at least one bin (40, as shown; figures 2-3), wherein the ramp has holes (55) therein for permitting heat to pass therethrough (for permitting passage of heated air; figure 3; column 3, lines 30-45) and vial slide or roll due to gravity (ampules 12 roll down the inclined wall 46; figure 3; column 3, lines 26-29), and wherein said two vertical side walls, said vertical front wall, said vertical rear wall, and said ramp form a bin volume (as shown; figures 1-3); a manually operated vial dispensing actuator (dispensing mechanisms 66 and 68 are manually actuated, figure 4, column 4, lines 3-6); a top (58) for covering said at least one bin (40, as shown; figures 1-3; column 3, lines 40-50); at least one heating element (26) for maintaining said at least one bin at a chosen temperature (to maintain a desired temperature within chest 10 (i.e. at least one bin); figure 3; column 4, lines 20-30 and 55-60); and an electrical power source for providing power to said at least one heating element (as shown via electrical wires 32 for energizing (providing power) to heating element 26; figure 3; column 2, lines 60-65; column 4, lines 20-30).

Since the common technical features are previously disclosed by Waxman, these common features are not special and so Groups I-II lack unity.