



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
03.01.2024 Bulletin 2024/01

(51) International Patent Classification (IPC):
B65D 85/18 (2006.01)

(21) Application number: **22181985.7**

(52) Cooperative Patent Classification (CPC):
B65D 85/185

(22) Date of filing: **29.06.2022**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
 Designated Extension States:
BA ME
 Designated Validation States:
KH MA MD TN

(71) Applicant: **ALLPACK S.R.L.**
46029 Suzzara (MN) (IT)

(72) Inventor: **GUAITA, Alessio**
46029 SUZZARA MN (IT)

(74) Representative: **Modiano, Micaela Nadia**
Modiano & Partners
Via Meravigli, 16
20123 Milano (IT)

(54) **HANGER FOR BOXES MADE OF CARDBOARD AND THE LIKE**

(57) A hanger (1) for boxes (50) for the transport of items of clothing and the like, comprising a tubular body (2) adapted to be placed within a box (50), with the ends of the tubular body configured to protrude from the side

walls (52) of the box, locking means (3, 6) being provided in order to lock the ends of the tubular body (2) against the side walls of the box (50).

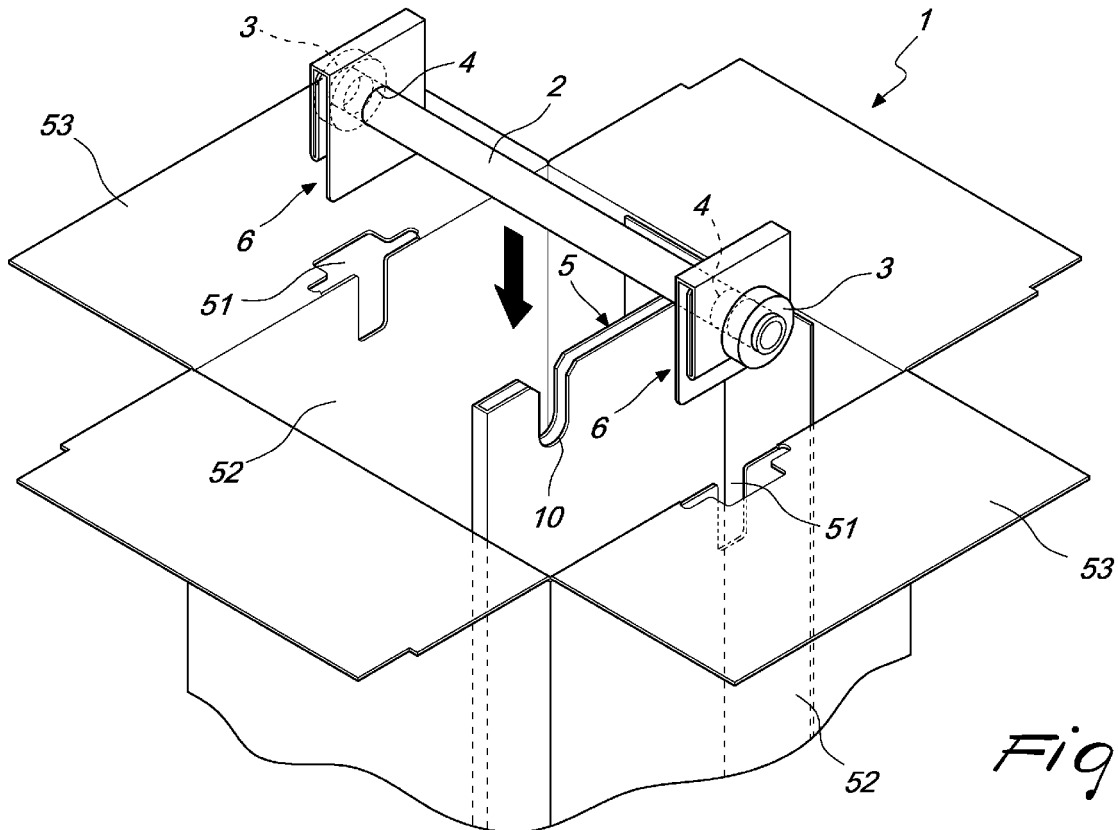


Fig. 5

Description

[0001] The present invention relates to a hanger for boxes made of cardboard and the like. More particularly, the invention relates to a hanger adapted to be used in boxes used for removals or for boxes used by clothing factories.

[0002] As is known, boxes that have a hanger bar inserted inside them are usually used for the transport of items of clothing. Said hanger bar is normally made of plastic material and is coupled to the walls of the box.

[0003] The hanger bar is interlocked at the side walls of the box, and is normally made monolithically of plastic material, metal or the like, and this entails difficulties in shipping and particularly in disposal.

[0004] Furthermore, the hanger bar has difficulties in coupling to the walls of the box.

[0005] The aim of the present invention is to provide a hanger for boxes made of cardboard and the like that has a high resistance to bending stress.

[0006] Within the scope of this aim, an object of the present invention is to provide a hanger for boxes made of cardboard and the like that can be coupled easily to the walls of a box in which said bar must be placed.

[0007] Another object of the present invention is to provide a hanger for boxes made of cardboard and the like that can be made of the same material as the box or of a different material.

[0008] Not least object of the present invention is to provide a hanger for boxes made of cardboard and the like that is highly reliable, relatively easy to provide and at competitive costs.

[0009] This aim and these and other objects which will become better apparent hereinafter are achieved by a hanger for boxes for the transport of items of clothing and the like, characterized in that it comprises a tubular body adapted to be placed within a box, with the ends of said tubular body configured to protrude from the side walls of said box, locking means being provided in order to lock said ends of the tubular body against side walls of said box.

[0010] Further characteristics and advantages of the invention will become better apparent from the description of preferred but not exclusive embodiments of the hanger according to the invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a plan view of the extension of a box adapted to accommodate the hanger according to the present invention;

Figure 2 is a plan view of a reinforcement element of the hanger according to the present invention with the reinforcement;

Figure 3 is a plan view of retention means of the hanger according to the present invention;

Figure 4 is an exploded perspective view of the hanger according to the present invention and of the cor-

responding box;

Figures 5 to 8 are perspective views of the various steps of the insertion of the hanger in the box and of the closure of the box.

[0011] With reference to the figures, in which identical reference numerals correspond to identical elements, the hanger according to the invention, designated by the reference numeral 1, is provided by a tubular body 2 that has a preferably circular cross-section (but might have another cross-section) and such a length as to protrude with its ends with respect to the side walls of a box 50 in which the hanger must be placed.

[0012] Conveniently, locking means are provided for locking the respective ends of the tubular body 2 so that it cannot be extracted from the box 50.

[0013] The locking means are provided by disk-like elements 3 adapted to be fitted on each end of the tubular body 2 that protrudes from the box 50, locking against the respective side wall of the box 50.

[0014] The locking means comprise moreover a pair of retention elements 6 provided with a hole 4 obtained by a die-cut portion as shown in Figure 3.

[0015] The hanger 1 according to the invention is adapted to be inserted, as mentioned, in the box 50, resting within vertical slots 51 formed in the side walls of the box 50 at the folding line between the side wall 52 and the upper closure flap 53.

[0016] The upper closure flap 53 blends with the respective side wall 52 and is provided, at the joining line, with a vertical slot 51.

[0017] The vertical slot 51 extends partially in the side wall 52 of the box and partially in the flap 53, so as to straddle the joining line between the side wall 52 and the flap 53.

[0018] The retention means 6 are adapted to be inserted so as to straddle the side walls of the portion of the slot 51 that is arranged in the side wall 52 of the box, so that the hole 4 of the retention means coincides with the opening of the slot 51, for the passage of the tubular body 2.

[0019] Coat-hanger hooks are adapted to be arranged around the tubular body 2.

[0020] The hooks can conveniently be locked on the tubular body 2 by means of adhesive tape.

[0021] The assembly of the hanger according to the invention is substantially as follows.

[0022] First of all, the tubular body 2 with the corresponding locking means 3 is prepared.

[0023] The hanger thus obtained is then inserted in the box 50, with its ends inserted in the vertical slots 51, after inserting the ends of the tubular body 2 within the holes 4 of the retention means 6, so that the retention means 6 can then be inserted downward from above into the slots 51.

[0024] Then the locking means 3 are prepared and are fitted on the ends of the tubular body 2, locking it within the slots 51 and arranging themselves at the external

surface of the side walls 52 of the box.

[0025] The box 50 is then closed with the corresponding upper flaps 53.

[0026] Furthermore, as a further stiffening of the hanger, it is possible to provide a reinforcement element 5 having a T-shaped or L-shaped cross-section, which is adapted to be placed under the body 2 of the hanger, with the hanger interlocking in a notch 10 formed on the upper edge of the reinforcement element 5, at right angles to the reinforcement element, and configured to rest with the long side of the T-shape or L-shape on the bottom of the box 50, and with the short side of the T-shape or L-shape against a side wall of box 50.

[0027] This reinforcement element can be used depending on the criticality of the coupling strength.

[0028] In practice it has been found that the hanger according to the invention fully achieves the intended aim and objects, since it allows to arrange it easily in a box, locking it with locking means that are easily disposable like the body of the hanger.

[0029] Furthermore, both the box 50 and the hanger 1 according to the invention are made of recycled cardboard. However, the materials of which the box 50 and the hanger 1 can be made are disparate and comprise, for example, corrugated cardboard, flat cardboard, laminated cardboard (i.e., flat cardboard and corrugated cardboard), corrugated PP sheet, PVC plastic, mixed cardboard and plastic, honeycomb cardboard, reboard, Laminil®, mixed corrugated and honeycomb cardboard, mixed corrugated cardboard and reboard, and paperboard.

[0030] The hanger thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the accompanying claims.

[0031] All the details may furthermore be replaced with other technically equivalent elements.

[0032] In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

[0033] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A hanger (1) for boxes (50) for the transport of items of clothing and the like, **characterized in that** it comprises a tubular body (2) adapted to be placed within a box (50), with the ends of said tubular body configured to protrude from the side walls of said box, locking means (3, 6) being provided in order to lock said ends of the tubular body (2) against side walls of said box (50).

2. The hanger according to claim 1, **characterized in that** said locking means (3, 6) comprise retention means (6) provided by a die-cut portion which can be folded onto itself in order to form a locking element provided with a hole (4) for fitting on the ends of the tubular body (2), said retention means (6) being adapted to be inserted so as to straddle a slot (51) of the box (50).

3. The hanger according to claim 1 or 2, **characterized in that** said locking means further comprise a disk-like element (3) adapted to be fitted on the ends of said tubular body (2) that protrude from said box (50).

4. A box (50), **characterized in that** it comprises a hanger (1) according to one or more of the preceding claims.

5. The box according to claim 4, **characterized in that** it comprises a pair of slots (51) formed at mutually opposite side walls, at the folding line between said side walls and upper closure flaps of said box (50) and adapted to be engaged by the ends of said tubular body of the hanger.

6. The box according to claim 5, **characterized in that** said slots (51) are vertical.

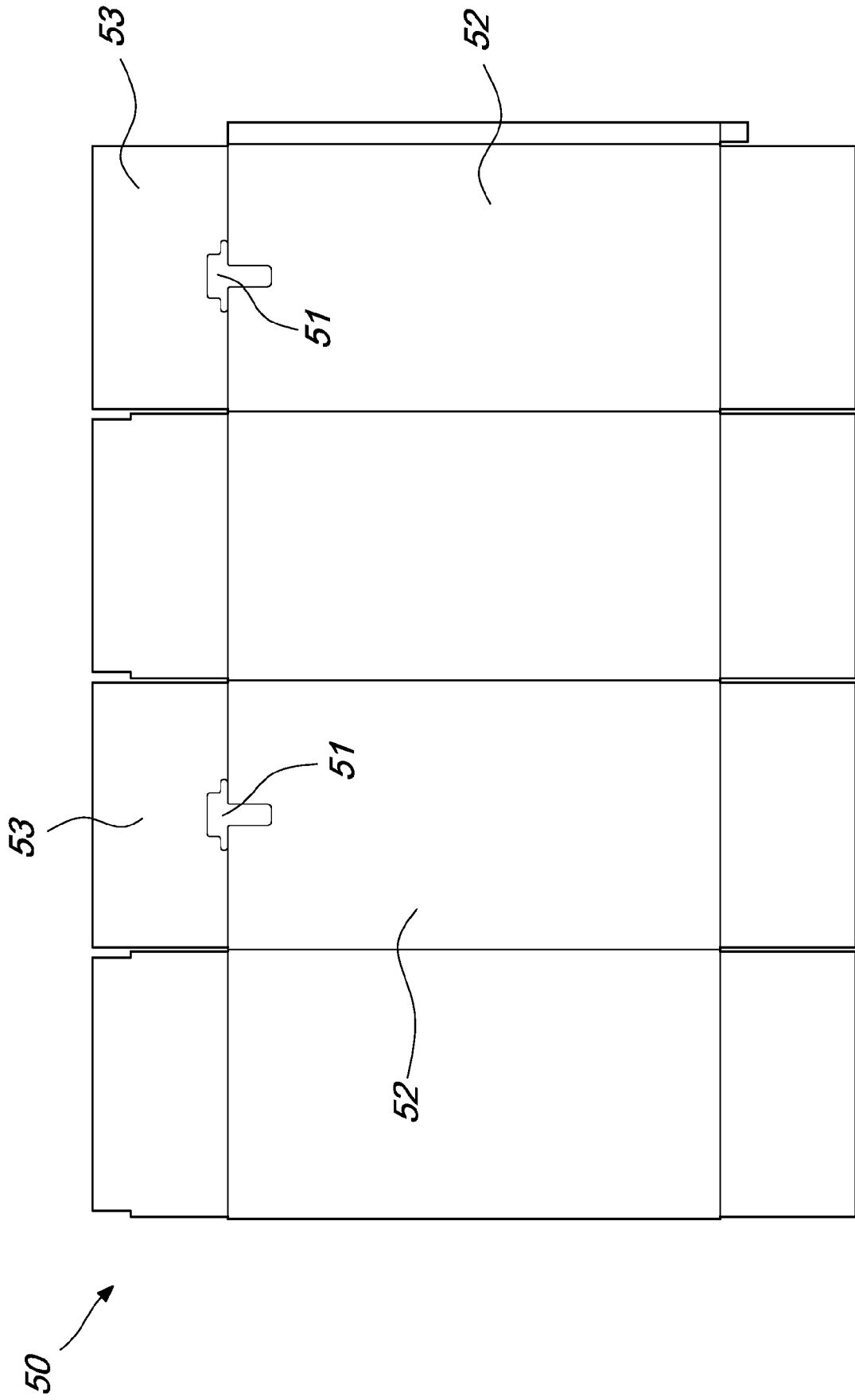


Fig. 1

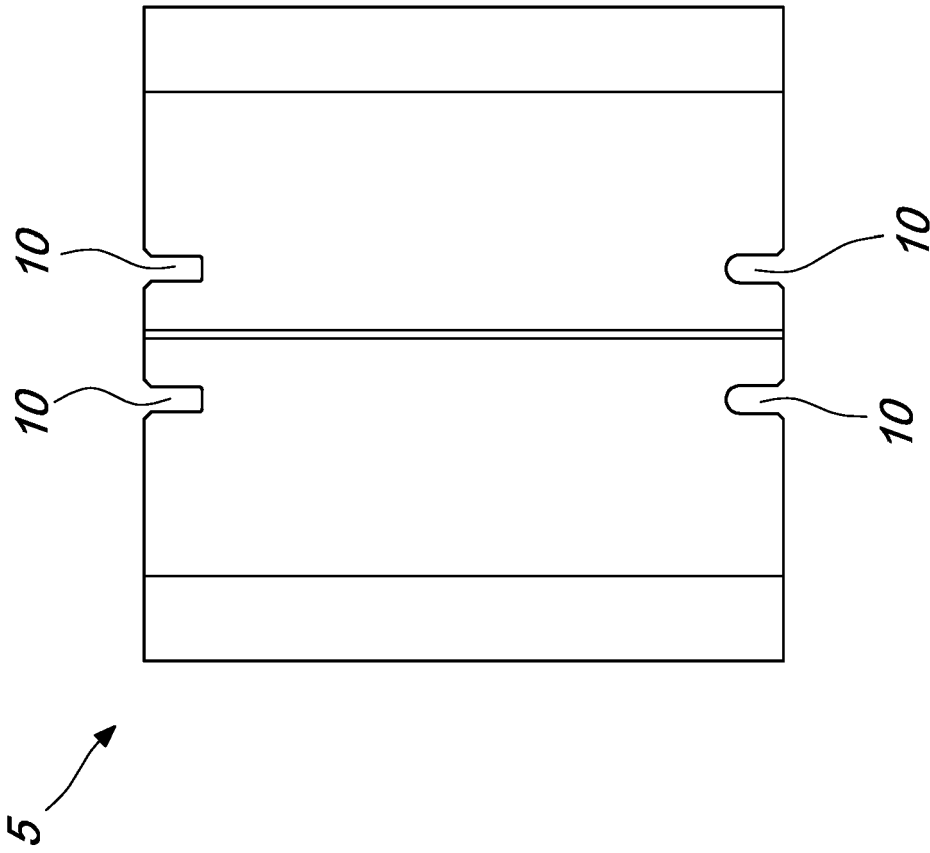


Fig. 2

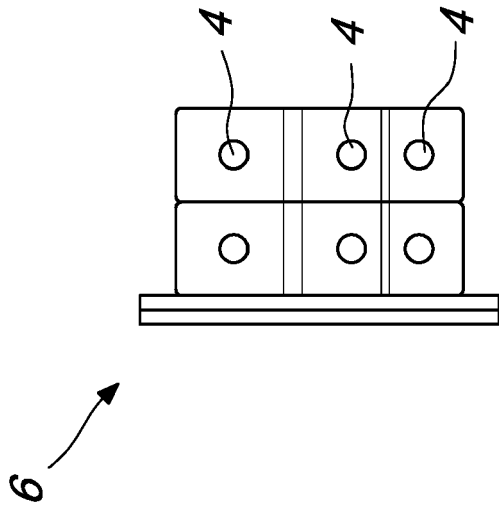


Fig. 3

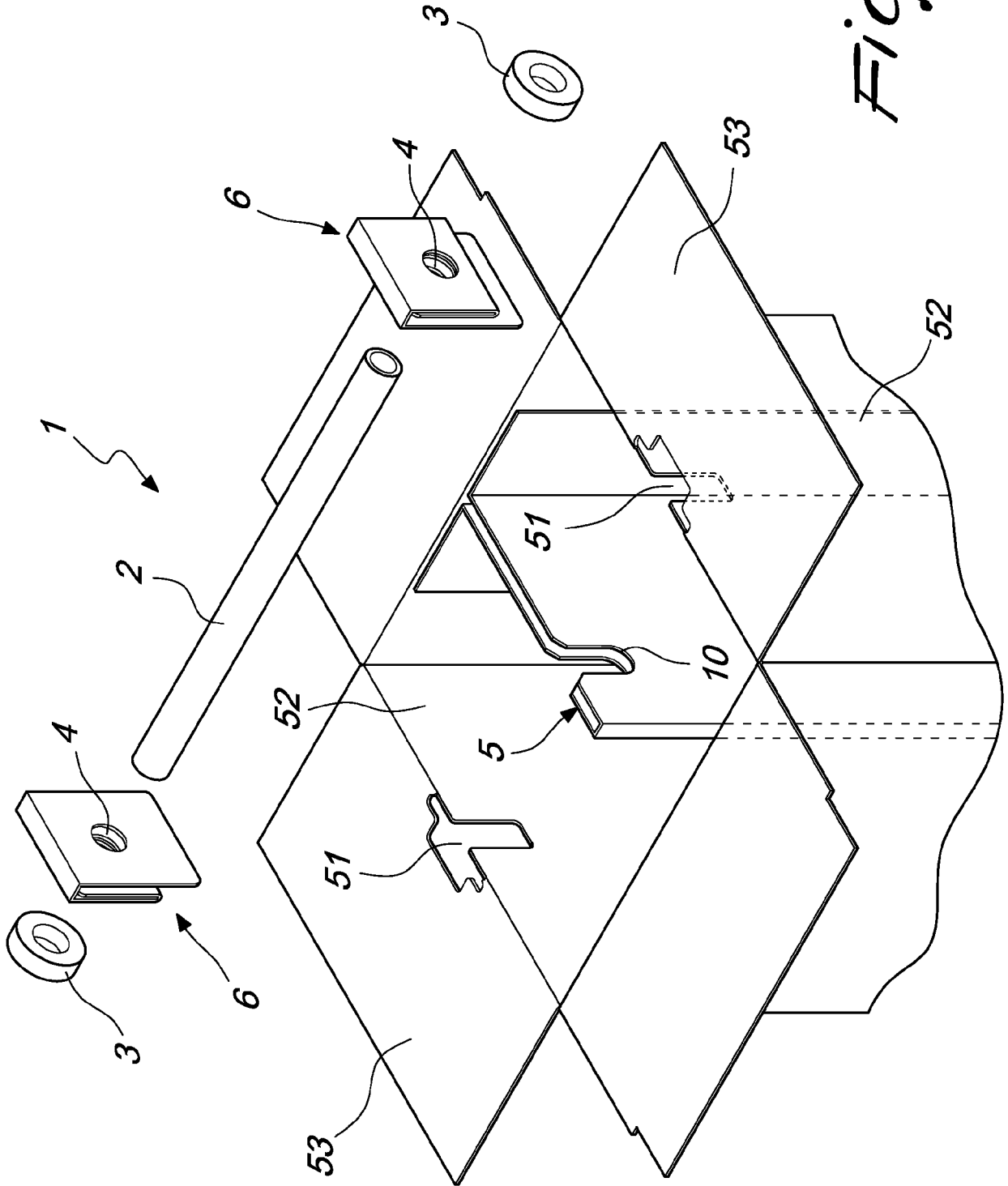
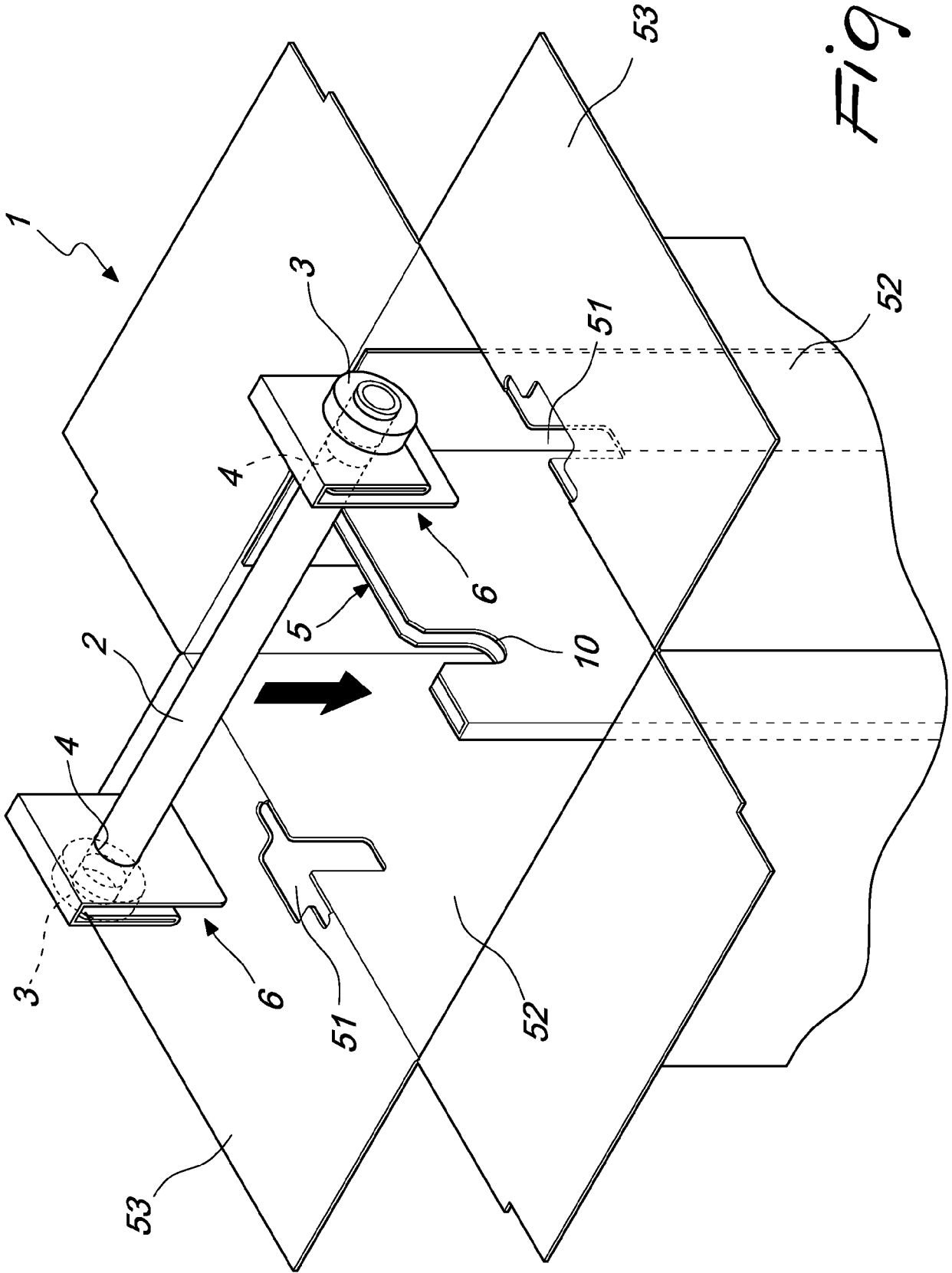


Fig. 4



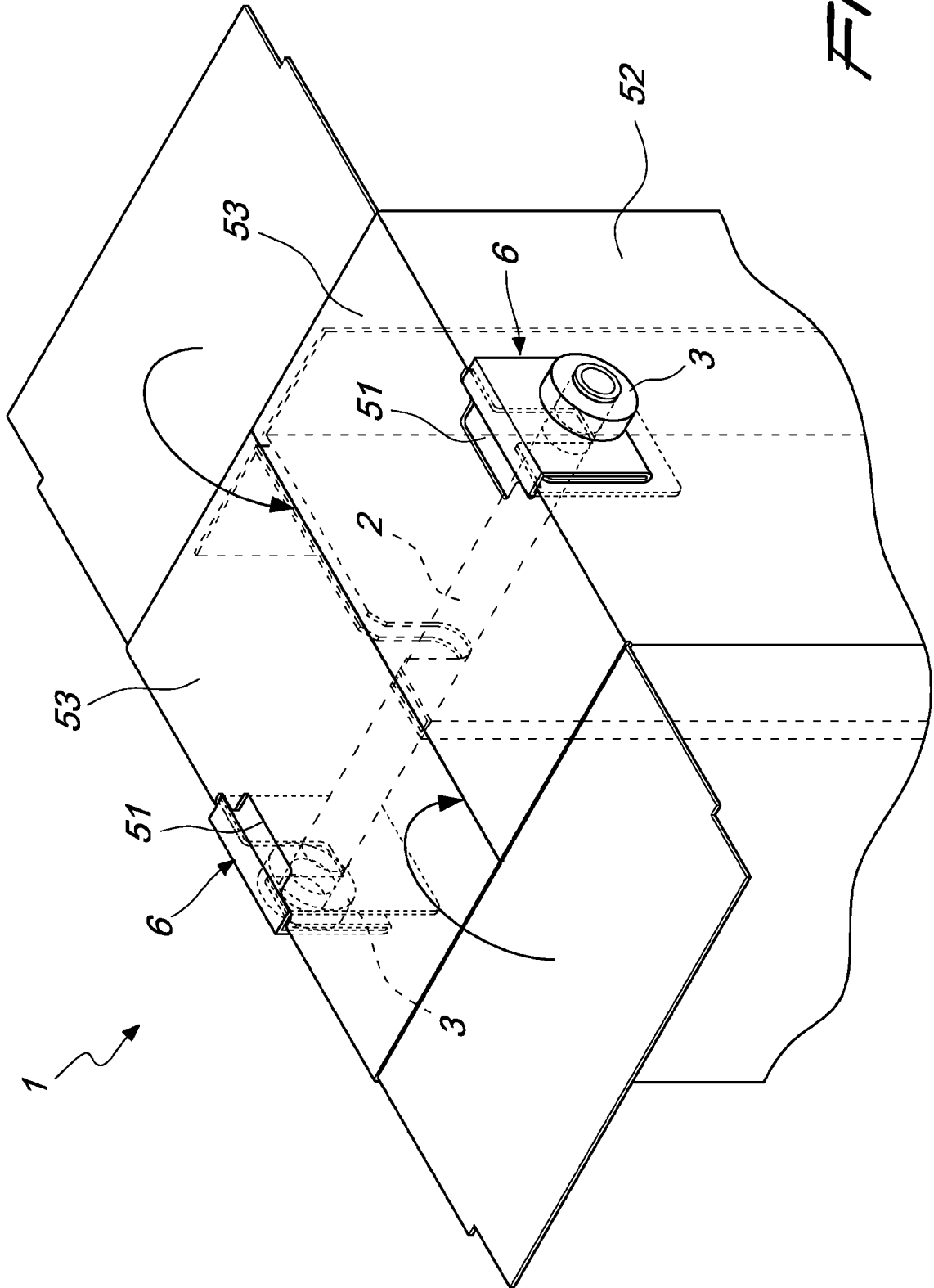


Fig. 7

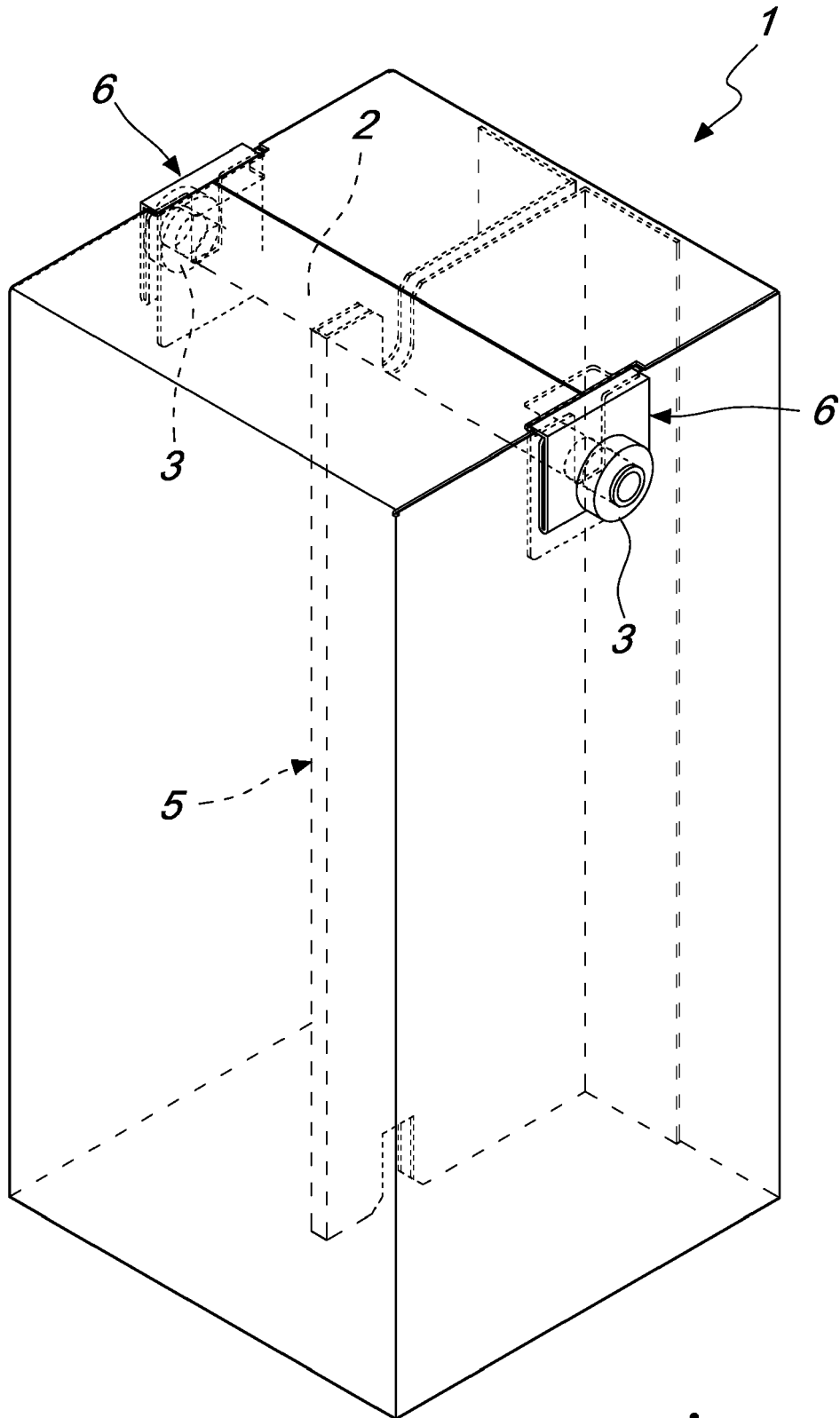


Fig. 8



EUROPEAN SEARCH REPORT

Application Number

EP 22 18 1985

5

DOCUMENTS CONSIDERED TO BE RELEVANT

10

15

20

25

30

35

40

45

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	FR 1 255 476 A (CARTONNERIES ELIOT) 10 March 1961 (1961-03-10) * pages 1-3 * * figures 1-10 *	1, 2, 4	INV. B65D85/18
X	GB 1 004 713 A (IRVING RICHER) 15 September 1965 (1965-09-15) * page 1, line 1 - page 5, line 9 * * figures 1-21 *	1, 4-6	
X	JP S62 109784 A (KOYAKATA MASATOMO) 20 May 1987 (1987-05-20) * columns 1, 2 * * figures 1-7 *	1, 3, 4	
X	FR 1 490 683 A (CARTONNERIE DE KAYSERSBERG) 4 August 1967 (1967-08-04) * pages 1-3 * * figures 1-8 *	1, 4-6	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D

The present search report has been drawn up for all claims

4

50

Place of search Munich	Date of completion of the search 9 December 2022	Examiner Duc, Emmanuel
----------------------------------	--	----------------------------------

55

EPO FORM 1503 03:82 (P04C01)

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

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 18 1985

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-12-2022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 1255476 A	10-03-1961	NONE	
GB 1004713 A	15-09-1965	NONE	
JP S62109784 A	20-05-1987	NONE	
FR 1490683 A	04-08-1967	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82