



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
04.07.2007 Bulletin 2007/27

(51) Int Cl.:
A47F 5/08 (2006.01)

(21) Application number: **05113006.0**

(22) Date of filing: **27.12.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(72) Inventors:
• **Sjölander, Håkan**
840 60, Bräcke (SE)
• **Andersen, John**
1605, Fredrikstad (NO)

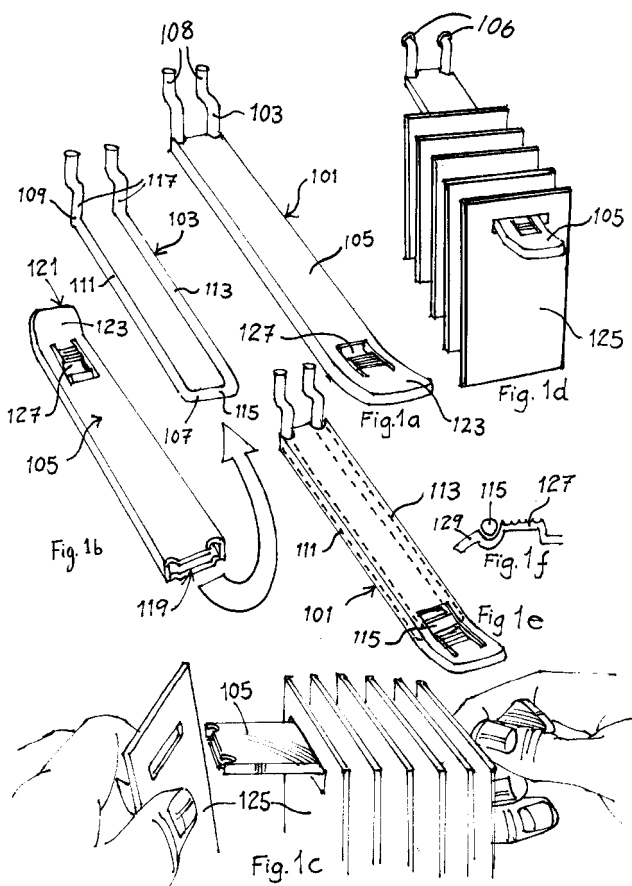
(71) Applicant: **SmartTech Innovation AB**
840 60 Bräcke (SE)

(74) Representative: **Pierrou, Mattias et al**
Awapatent AB,
P.O. Box 45 086
104 30 Stockholm (SE)

(54) **A display hook**

(57) This invention relates to a display hook (101) comprising a body (103) having a rear end and a front end, an elongate package reception part (105), which is arranged to receive packages thereon, which is removably connected with the body, and which is mountable

at the body from the front end thereof. The body has a hook support portion (117) at the rear end thereof, and a connection portion, and the package reception part has connection means, which is engaged with the connection portion.



Description

FIELD OF THE INVENTION

[0001] The present invention relates generally to the display of products, such as merchandise. More specifically, the invention relates to a display hook, which is used for displaying products on a wall fixture.

BACKGROUND OF THE INVENTION

[0002] The packaging for many products is specifically designed to permit the products to be hung from a display hook. The display hook, in turn, is hang up on, i.e. supported by, a wall fixture. There are many types of wall fixtures, such as pegboards, hanger bars, wire grids, slat walls, etc.

[0003] When displaying products having a limited shelf life, such as foodstuffs, batteries, etc., it is preferred to place the products having the earliest expiry date in front, so that they will be sold first. From a sales perspective a display hook should be refilled before all products are sold. Then, in order to keep the correct order of expiry dates, the remaining products will have to be removed before hanging up new ones on the display hook, and then put back again. This is disadvantageous in that it is a time consuming operation. There also is a risk that, due to inconvenience, the person refilling the display hooks will ignore the expiry date problem and simply hang up new products without first removing the products of earlier dates.

SUMMARY OF THE INVENTION

[0004] It is an object of the present invention to provide a display hook that alleviates the above-mentioned drawbacks of the prior art display hooks.

[0005] This object is achieved by a display hook according to the present invention as defined in claim 1.

[0006] Thus, in accordance with an aspect of the present invention, there is provided a display hook comprising a body having a rear end and a front end, an elongate package reception part, which is arranged to receive packages thereon. The package reception part is removably connected with the body, and it is mountable at the body from the front end thereof. The body has a hook support portion at the rear end thereof, and a connection portion. The package reception part has connection means, which is engaged with the connection portion.

[0007] Due to the two part display hook having a removable package reception part mountable on the body from the front thereof, it is possible to remove that part, hang packages thereon and mount the package reception part at the body while the packages are hanging on the package reception part. Consequently, a most simple and effective loading/reloading of packages on the display hook has been obtained according to this invention.

Additionally, by hanging the packages on the package reception part from the rear end thereof, a FIFO (First In First Out) cycle is achieved, where the older packages may remain on the package reception part while hanging the fresh ones behind them.

[0008] In accordance with an embodiment of the display hook, the connection portion has a pin portion, and the connection means has a casing portion, which is engaged with the pin portion. This is convenient, since the connection portion does not interfere with the packages that has been hung on the package reception part, when mounting the package reception part at the body.

[0009] In accordance with embodiments of the display hook, different advantages are obtained when the connection portion is a U-shaped peg respectively is flat iron shaped.

[0010] However, also a recessed connection portion is possible, combined with a pin portion of the connection means, and sometimes advantageous in accordance with embodiments of the display hook. The recess can be obtained in many different embodiments.

[0011] In accordance with an embodiment of the display hook, the locking means is a releasable snap-in member. Thereby it is easy to mount and fasten the package reception part on the body.

[0012] In accordance with an embodiment of the display hook, the package reception part has a package retainer at a front end thereof. The package retainer prevents the packages from sliding off the display hook by itself, while permitting a package to be pulled off the hook by an added force.

[0013] In accordance with an embodiment of the display hook, the package reception part is formed as a casing. The casing form facilitates the mounting of the package reception part on the body.

[0014] In accordance with an embodiment of the display hook, the package reception part has a rectangular cross-section, which makes it easy to handle.

[0015] These and other aspects, features, and advantages of the invention will be apparent from and elucidated with reference to the embodiments described hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The invention will now be described in more detail and with reference to the appended drawings in which:

Figs. 1a-1e are perspective views of a first embodiment of a display hook according to the present invention;

Fig. 1f is a sectional view of a portion of the display hook of Figs. 1a-1e;

Figs. 2a-2 are perspective views of a second embodiment of a display hook according to this invention;

Figs. 3a-3 are perspective views of a third embodi-

ment of a display hook according to this invention; Figs. 4a-4 are perspective views of a fourth embodiment of a display hook according to this invention; Figs. 5a-5b are perspective views of a fifth embodiment of a display hook according to this invention; Fig. 5c is a sectional view of a portion of the display hook of Figs. 5a-5b;

Figs. 6a-6c are perspective views of a sixth embodiment of a display hook according to this invention; Figs. 8a-8c are perspective views of a seventh embodiment of a display hook according to this invention;

Figs. 9a-9c are perspective views of an eighth embodiment of a display hook according to this invention; and

Figs. 10a-10b are perspective views of a ninth embodiment of a display hook according to this invention;

DESCRIPTION OF PREFERRED EMBODIMENTS

[0017] As shown in Figs. 1a-1f a first embodiment of the display hook 101. The display hook comprises a body 103 and an elongate package reception part, or package carrier, 105. The body is constituted by a substantially U-shaped peg, which has a front end 107 and a rear end 109. Thus, the body 103 has two parallel side pin portions 111, 113, extending at a distance from each other and being joined by a transverse front pin portion 115 at the front end 107 of the body 103. The side pin portions 111, 113 and the front pin portion 115 constitute a connection portion, at which the body 103 is connected with the package carrier 105. At the rear end 109 thereof, and joined to the connection portion, the body 103 has a hook support portion 117, which is constituted by a rear end pin portion extending from each respective side pin portion 111, 113 at an angle, more particularly substantially perpendicular, to the side pin portion 111, 113. The hook support portion 117 is adapted to a wall fixture that the display hook 101 is meant to be suspended on. There are many types of wall fixtures, such as pegboards, hanger bars, wire grids, slat walls, etc., and the support portion 117 will look a bit different depending on the type of wall fixture. For example, the display hook is adapted to a wall fixture having holes 106, see Fig. 1d, through which pin-shaped suspension portions 108 of the hook support portion 117 are pushed when the display hook 101 is suspended on the wall fixture. By the weight of the display hook 101 the suspension portions 108 engage with the wall fixture and keeps the display hook in place. This is common knowledge to a person skilled in the art, and will not be further elucidated here.

[0018] The package carrier 105 is constituted by an elongate casing having an open rear end 119, and a closed front end 121. The package carrier 105 comprises a connection means 110, constituted by a straight casing portion of the package carrier and including a locking member 127. The package carrier 105 is mountable at

the body 103 by placing the open rear end 119 at the front end 107 of the body 103, and pushing the connection means 110 onto the connection portion 111, 113, 115 of the body 103 from the front end 107 of the body 103. Thus, when mounted, the package carrier 105 constitutes a housing of the display hook, where only the hook support portion 117 protrudes from the interior of the package carrier 105. The connection portion 111, 113, 115 and the connection means 110 are engaged with each other.

[0019] The package carrier 105 has a rectangular cross-section, and it has a package retainer, in the form of an upwardly raised front end portion 123, at the front end 121 thereof, adjacent to the connection means 110. Thus, the front end portion 123 is bent upwards. This is in order to prevent packages 125 from inadvertently falling off the hook 101.

[0020] Further, the locking member 127, comprised in the connection means 110, is a releasable snap-in locking member 127. The snap-in locking member 127 constitutes a laterally centred tongue, which is cut-out portion of a top panel of the casing 105, and which is positioned at the front end of the connection means 110. The tongue 127 extends rearwards from the root thereof towards the tip, i.e. the free end, thereof. The tongue 127 is resilient and has a locking ridge 129 close to the tip. When the package carrier 105 is being mounted on the body 103, the locking ridge 129 is pushed down and passes below the transverse pin portion 115, and then returns up at the rear side of that pin portion 115, which constitutes a locking portion. Thereby, the tongue 127 retains the package carrier 105 on the body 103, and prevents it from being pulled off the body 103 when a customer tries to pull off a product from the display hook 101 and the package gets a bit stuck on the hook, which may happen. In order to remove the package carrier 105 from the body 103, a person has to release the snap-in locking member 127, by pushing down the tongue 127, and then pull the package carrier 105 off the body 103.

[0021] A second embodiment of the display hook, as shown in Figs. 2a-2c, has a body 203, which comprises a connection portion 204 consisting of a single pin 203, and which has a front end 207 and a rear end 209. A hook support portion 211 is joined to the connection portion 204 at the rear end 209 of the body 103. A locking portion 213, which is a longitudinally arc shaped recess of the connection portion 204, is formed close to the front end 207 of the body 203. The package reception part 205 is an elongate casing which is mountable on the body 203. The inner cavity of the casing 205 has a square cross-section. The casing 205 has a connection means 206, which is a straight portion of the casing 205, and a package retainer, in the form of an upwardly raised front end portion 215 of the casing 205, at the front end 217 thereof, joined to the connection means 206.

[0022] Further, the connection means 206 comprises a snap-in locking member 219. The snap-in locking member 219 constitutes a laterally centred resilient tongue,

which is cut-out portion of the wall of the casing 205, and which is joined to the rest of the connection means 206 close to the front end portion 215. Contrary to the tongue of the first embodiment the tongue 219 of this second embodiment extends towards the front end 217 of the casing 205. The tongue 219 has a locking ridge 221 close to the tip thereof. The locking ridge 221 faces inwards of the casing 205, i.e. towards the top surface of the body 203. When the casing 205 is being mounted on the body 203, the locking ridge 221 is pushed up and passes into the recess 213 while returned downwards by the inherent spring force of the tongue 219. In order to remove the casing 205 it is simply pulled off the body 203. The pulling force can be rather low, more or less only overcoming the spring force of the tongue 219. The spring force of the tongue 219 only has to be large enough to prevent the casing 205 from being pulled off the body 203 when a customer is pulling off a package.

[0023] The rear end 223 of the casing 205 is tapered in order to facilitating the operation of hanging packages thereon.

[0024] According to a third embodiment of the display hook, as shown in Figs. 3a-b, the body 303 is constituted by a flat iron consisting of a connection portion 304, comprising a locking portion 311 at the front end thereof, and a hook support portion 313, which is joined to the connection portion 304 at the rear end thereof. The hook support portion 313 constitutes a two-leg portion extending upwards substantially perpendicular to the rest of the body 303. The locking portion 311 is a central protrusion of the body 303, which protrusion has a substantially narrower width than the rest of the connection portion 304, and is T-shaped, where the top bar of the T-shaped protrusion 311 has a transverse arc shaped edge surface 315. The package reception part, which is an elongated casing 305, has a connection means including a locking member consisting of a clip 319, arranged within the casing 305, at a front end portion 317 of the connection means, which is also a front end portion of the casing 305. Further, the connection means has arc shaped recesses 320 at both sides of the front end portion 317.

[0025] Grip portions 321 of the clip 319 protrudes through the recesses 320, and shoulders 323 at the ends of legs, extending from the grip portions 321 and crossing each other, are arranged to engage with respective portions of a bottom surface of the top bar of the T-shaped locking portion 311 when the casing 305 is mounted on the body 303. Thus, in order to release the casing 305 from the body 303, the grip portions 321 of the clip are squeezed together, and thereby the shoulders 323 are forced out of engagement with the locking portion 311. Then, by simultaneously pulling the casing 305 it will be removed from the body 303.

[0026] In a fourth embodiment of the display hook 401, the body 403 is similar to that of the third embodiment, but the connection portion is differently shaped. It has a locking portion 407 comprising a slightly tapered tip portion 409, and V-shaped recesses 411 at both sides there-

of rear of the tip portion 409. The package reception part 405 is formed as a casing though being downwards open having merely longitudinal bottom lips 411 covering a respective portion of the bottom surface of the body 403.

5 The top panel of the casing 405 is smooth, since the connection means is constituted by two resilient arc-shaped tongues 415, extending longitudinally on the inside of respective opposite side panels of the casing 405. When the casing 405 is mounted on the body 403, the
10 tongues 415 are engaged with the V-shaped recesses 411. In order to remove the casing 405 a person will merely have to pull it off the body 403. However, the connection force achieved by means of the tongue-recess engagement it large enough to prevent the casing from being
15 pulled off when a package is pulled off the display hook 401.

[0027] As shown in Figs. 5a-c, a fifth embodiment of the display hook comprises a flat iron body 503, which consists of a connection portion 504 and a hook support portion 508, which is joined to the connection portion at a rear end thereof. Further, the connection portion 504 has a hole 511 close to a front end 507 thereof. The hole 511 defines a locking portion 513, which is a rib extending laterally at the very front end 507. Except for the locking
20 portion 513 this body 503 is similar to the body 403 of the fourth embodiment. The display hook further comprises a package reception part 505, which includes an upper flat iron 515 and a lower flat iron 517 extending in parallel with the upper flat iron 515. The upper and lower flat irons are joined to a narrow distance portion 519 at
25 either side of the package reception part, or carrier, 505, leaving an aperture between them. When mounting the carrier 505 on the body 503, the carrier 505 is pushed onto the body 503, which passes through the aperture, and in between the upper and lower flat irons 515, 517.
30 At the front end of the lower flat iron 517, there are arranged distance protrusions 521 at opposite sides of the lower flat iron 517. The distance protrusions 521 extend from the lower to the upper flat iron, providing the same space between the flat irons 515, 517 as the distance
35 portions 519 at the rear end of the carrier 505.

[0028] Close to a front end of the carrier 505 there is provided a locking member 523 for locking the carrier 505 at the body 503. The locking member 523 has the same function as the locking member 127 of the first embodiment, and is similarly shaped, wherein it has a tongue 523 that is engaged with the locking portion 513 of the body 503 when the carrier 505 is mounted at the body 503, as is best seen in Fig. 5c.

50 **[0029]** A sixth embodiment of the display hook 601 is shown in Fig. 6a-c. It comprises a body 603, which has a connection portion 604 being shaped like a pipe having a longitudinal slot 607 facing upwards. The connection portion 604 is attached, at a rear end thereof, to a hook support portion 609. Thus, in this embodiment the connection portion 604 comprises a recess. The package reception part 605 is pin shaped, and will be denoted carrier pin in the following. The carrier pin 605 consists

of a straight connection means 606, and a package retainer 608, which is a front portion joined to the connection means 606 at a front end thereof, and which is raised, or inclined, upwards.

[0030] As shown by the cross-sectional view of Fig. 6c, the connection means comprises a locking member 611, constituting a lower substantially circular portion thereof, extending along the length of the connection means 606 and being fitted into the interior of the pipe shaped connection portion 604 of the body 603. Further, the connection means 606 comprises a waist portion 613 extending through the aperture 607, and a roof portion 615 covering the connection portion 604 and having a width in excess of the diameter of the connection portion 604. The waist portion 613 extends in parallel with, and is joined to, the locking member 611. The roof portion 615 extends in parallel with, and is joined to, the waist portion 613.

[0031] A seventh embodiment of the display hook 801 is shown in Figs. 8a-b. Like the sixth embodiment it has a body 803 comprising a hook support portion 807 and a connection portion 809 protruding from the hook support portion 807 and comprising a recess 811. However, in this embodiment the connection portion 809 is a tubular protrusion with an encircled cavity, which forms the recess 811. The package reception part 805 comprises a connection means 815 constituting a pin portion, a package carrier portion 813, and a package retainer portion 819. The pin portion 815 protrudes from the package carrier portion 813 and is thinner than that portion 813. Further, the pin portion 815 is square in cross-section and has a tapered end portion 817. The pin portion 815 is received in the recess 811. The outer dimensions of the tubular portion 809 of the body 803 and the package carrier portion 819 of the package reception part 805 are the same. Thus, in this embodiment, in addition to the package reception part 805, the body 803 has a package carrying portion, formed by the outside of the connection portion 809.

[0032] The pin portion 815 is engaged with the recess 811 by friction connection, such that an amount of friction high enough to prevent accidental removal of the package reception part 805 is obtained. Optionally, some locking means can be provided just like in the above-described embodiments.

[0033] When packages are to be hang on the display hook 801, any remaining packages are pushed onto the body 803. Then the package reception part 805 is removed, new packages are loaded on that part from the rear end thereof, and finally the package reception part 805 is mounted at the body 803 again. The rear end is the end of the pin portion 815. Due to the tapered shape thereof, it is easy to load the packages.

[0034] An eighth embodiment of the display hook 901 is shown in Figs. 9a-c. This display hook 901 has a package reception part 905 having a recess at a rear end thereof, or the whole part 905 is a casing, and a package retainer portion 917 at a front end thereof. Close to the

rear end, there is a square hole 913 in a top panel of the package reception part 905, leaving a mere bar portion 915 of the top panel closest to the rear end. The body 903 of the hook 901 has a hook support portion 907, and a connection portion 909 protruding from the support portion 907. The connection portion 909 comprises a locking portion 911, which is a releasable snap-in member. The length of the connection portion 909 is only a fraction of the length of the package reception part 905. The connection portion 909 is received in the recess of the package reception part 905, and is releasable by pushing down the snap-in member 911.

[0035] Finally, yet another embodiment of the display hook 1001 is shown in Figs. 10a-b. It differs from the eighth embodiment in that the connection portion is a recess 1007 and the connection means is a protrusion 1009, which is received in the recess 1007. In other words, the body 1003 comprises a connection portion 1003 being a thick plate having a rectangular recess 1007 at the centre thereof. Thus, when mounting the package reception part 1005 at the body 1003, the protrusion 1009 is simply pushed into the recess 1007.

[0036] Above, embodiments of the display hook according to the present invention have been described. These should be seen as merely non-limiting examples. As understood by a skilled person, many modifications and alternative embodiments are possible within the scope of the invention.

[0037] It is to be noted, that for the purposes of this application, and in particular with regard to the appended claims, the word "comprising" does not exclude other elements or steps, that the word "a" or "an", does not exclude a plurality, which per se will be apparent to a person skilled in the art.

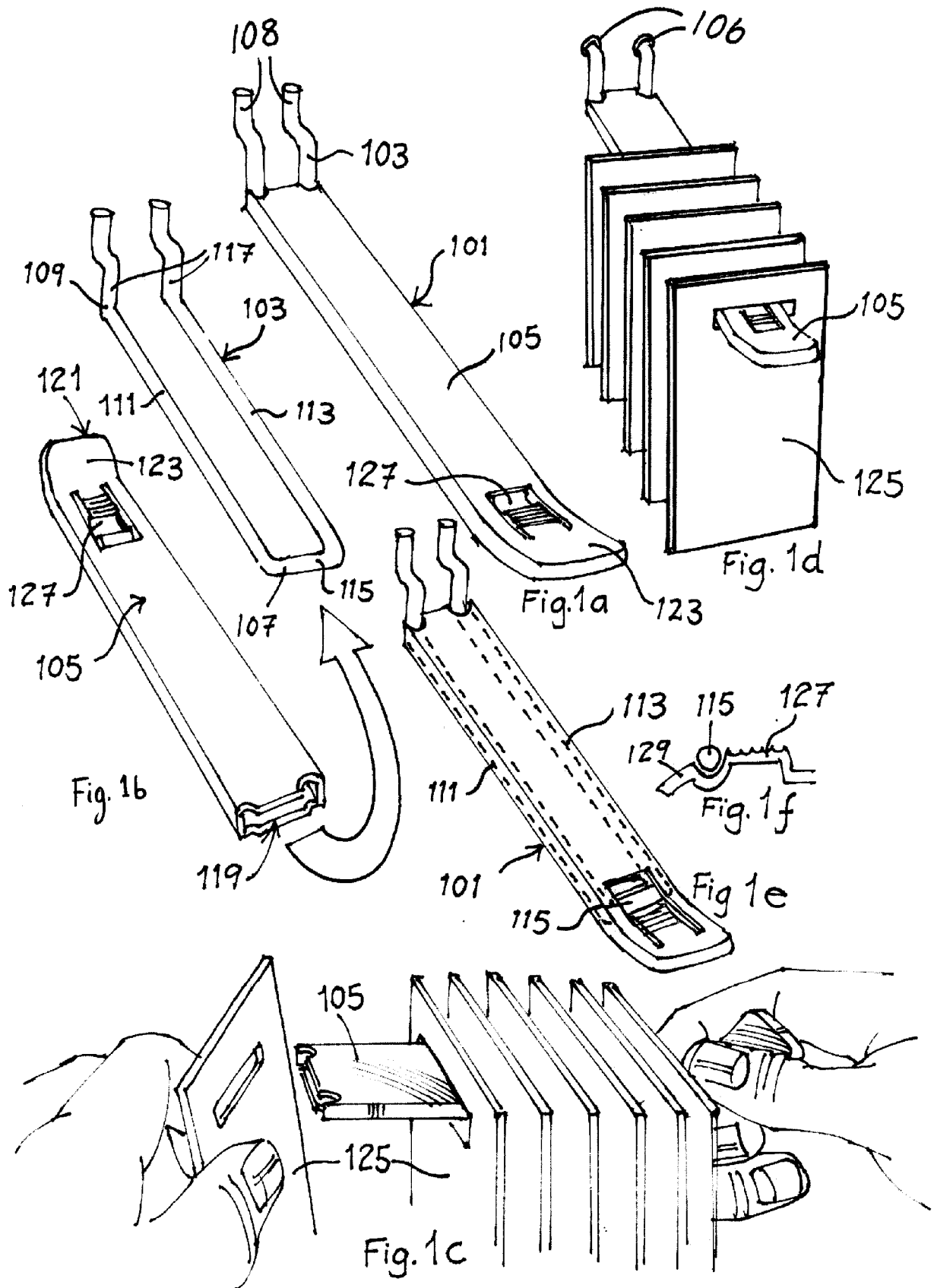
Claims

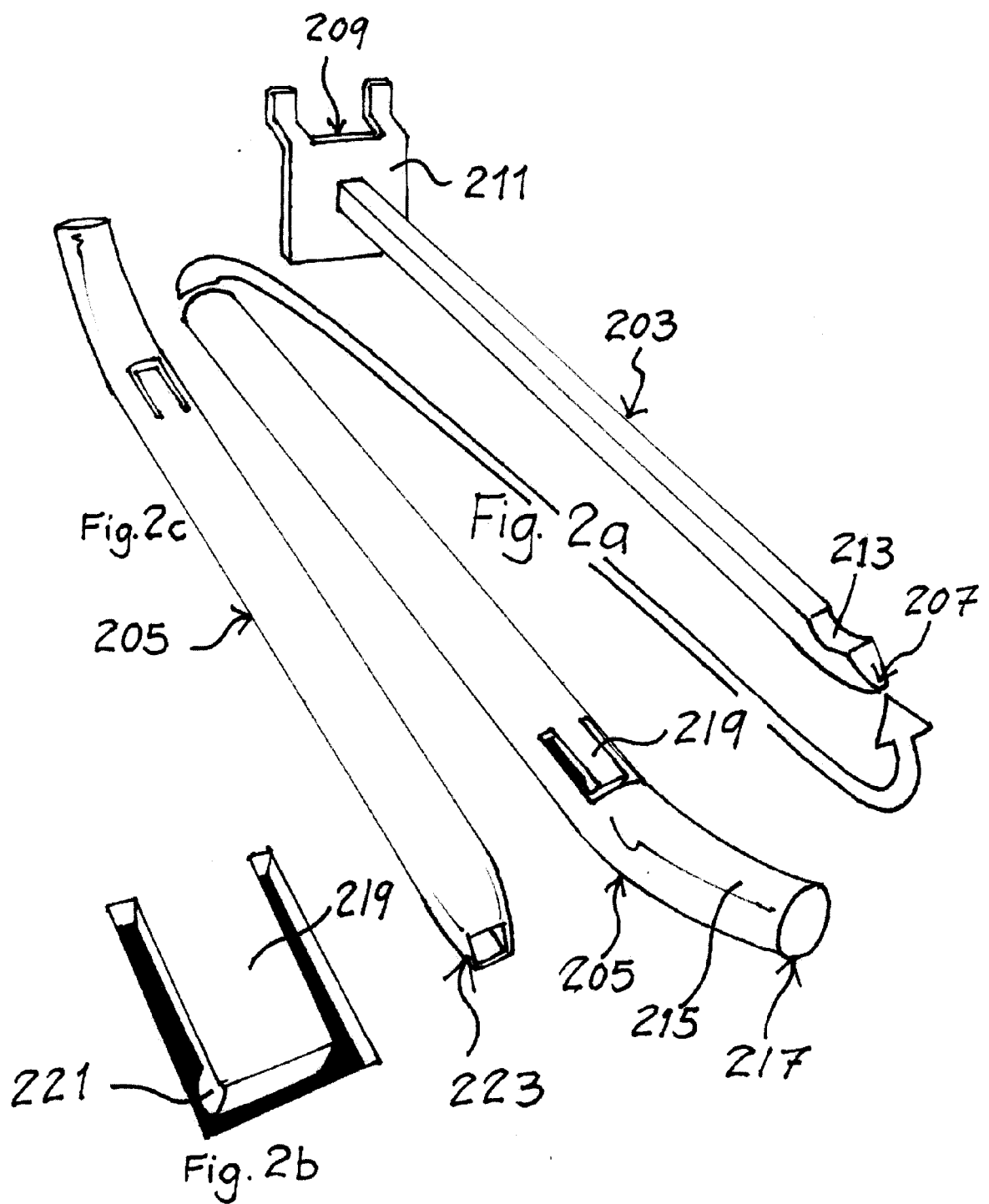
1. A display hook comprising a body having a rear end and a front end, an elongate package reception part, which is arranged to receive packages thereon, which is removably connected with the body, and which is mountable at the body from the front end thereof, wherein said body has a hook support portion at the rear end thereof, and a connection portion, and wherein said package reception part has connection means, which is engaged with said connection portion.
2. A display hook according to claim 1, wherein said connection portion comprises a pin portion and said connection means comprises a casing portion, which is engaged with the pin portion.
3. A display hook according to claim 1 or 2, wherein said package reception part is constituted by a casing.

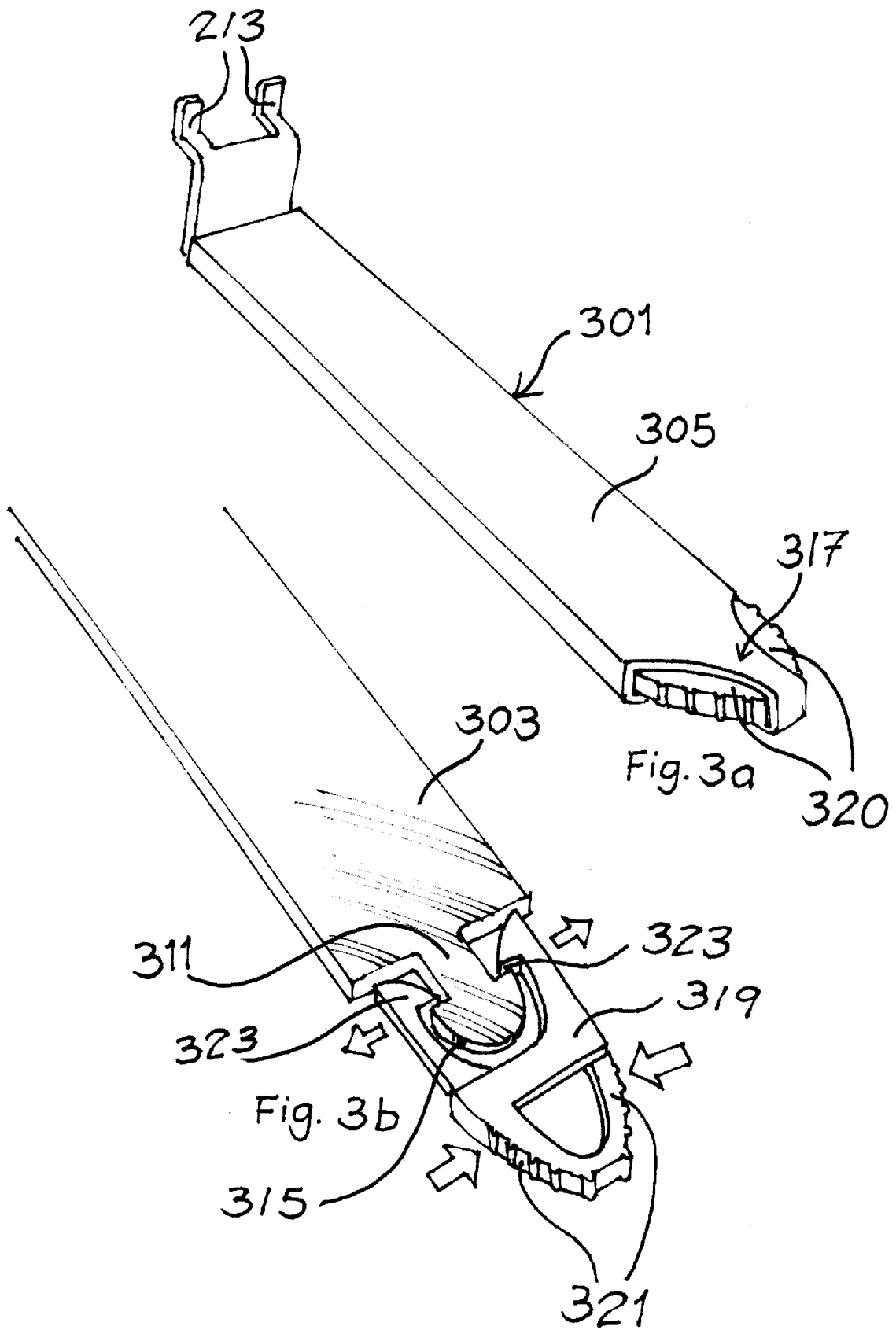
4. A display hook according to claim 1, 2 or 3, wherein said connection portion is constituted by a substantially U-shaped peg.
5. A display hook according to any one of claims 1-4, wherein said connection portion is flat iron shaped. 5
6. A display hook according to claim 1, wherein said connection portion comprises a recess, and wherein said connection means comprises a pin portion, which is received in said recess. 10
7. A display hook according to claim 6, wherein said recess is defined by a tubular protrusion protruding from said hook support portion. 15
8. A display hook according to any one of the preceding claims, wherein said connection portion is elongate.
9. A display hook according to any one of the preceding claims, wherein said connection means comprises a locking portion and said connection means comprises a complementary locking member. 20
10. A display hook according to claim 9, wherein one of said locking portion and said locking member constitutes a releasable snap-in member. 25
11. A display hook according to claim 9 or 10, wherein said locking portion is formed at the front end of the body. 30
12. A display hook according to any one of the preceding claims, wherein said package reception part has a package retainer at a front end thereof. 35
13. A display hook according to claim 12, wherein said package retainer is an upwardly raised front end portion of the package reception part. 40
14. A display hook according to any one of the preceding claims, wherein said body has a width that exceeds a height thereof.
15. A display hook according to any one of the preceding claims, wherein said package reception part has a rectangular cross-section. 45

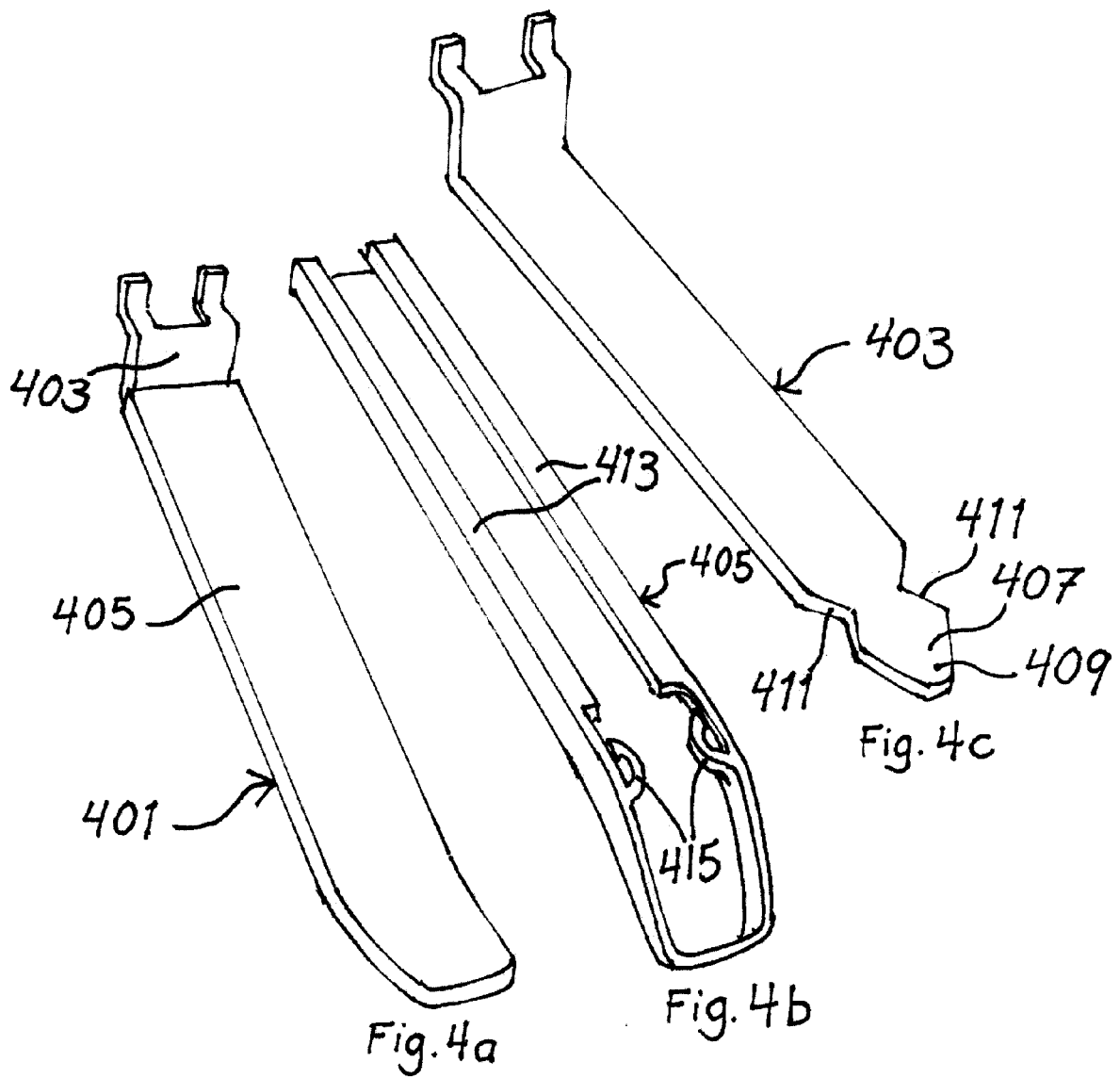
50

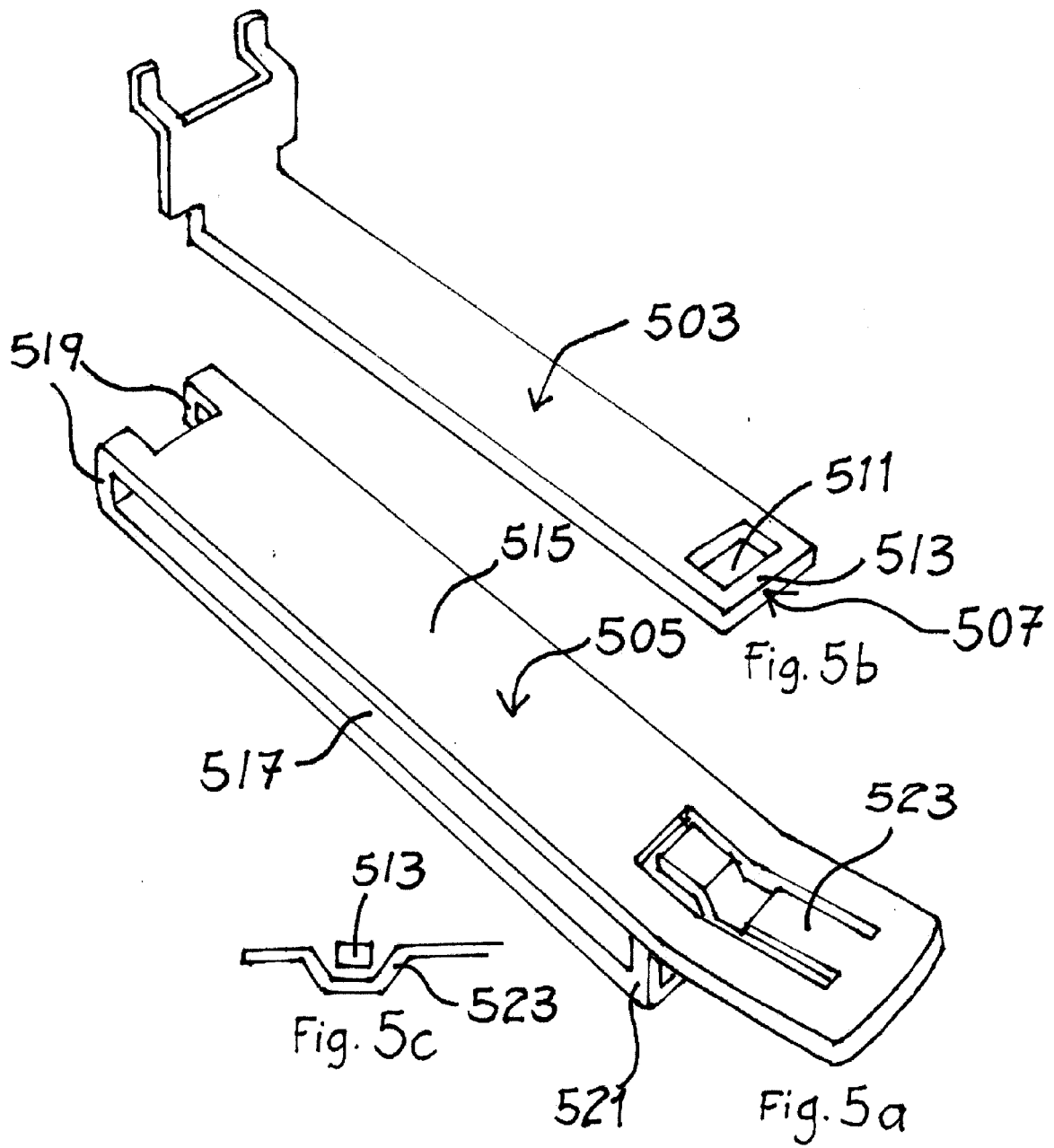
55

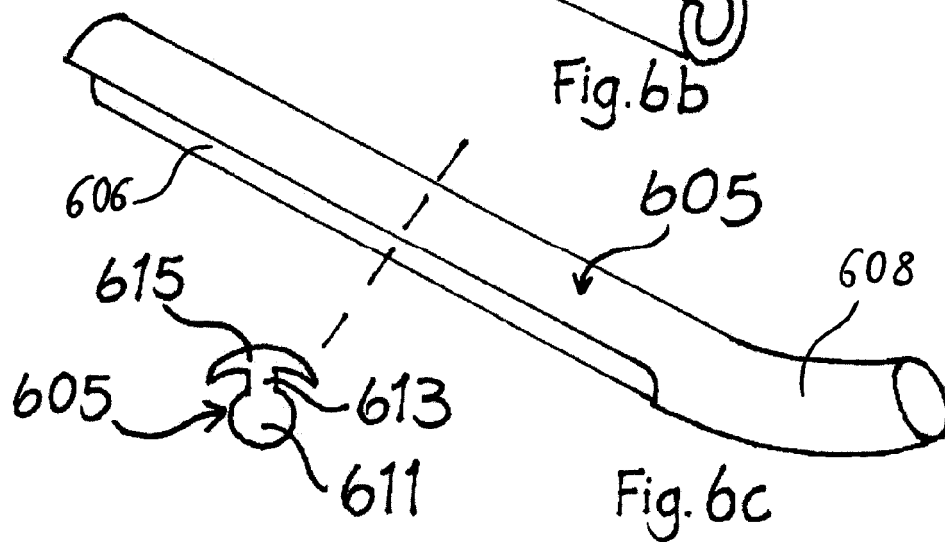
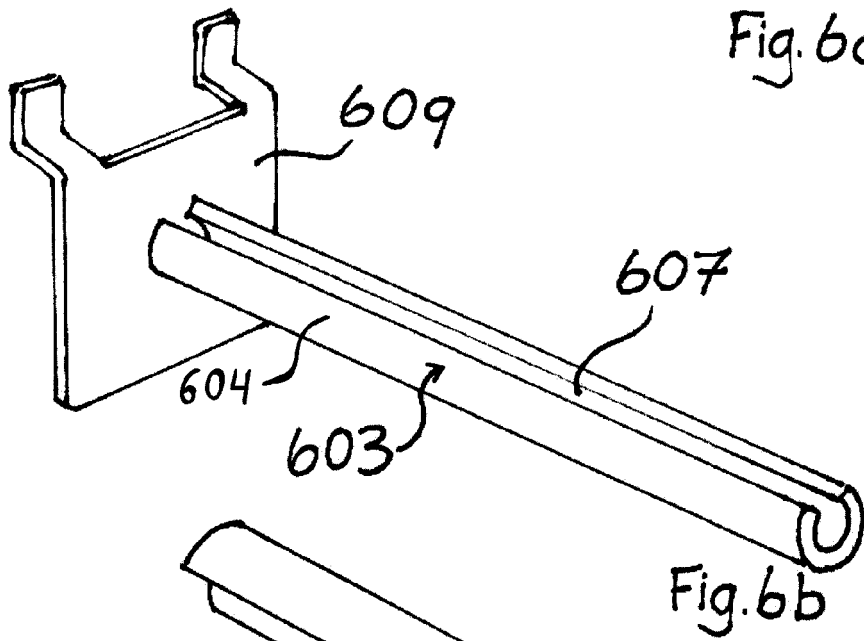
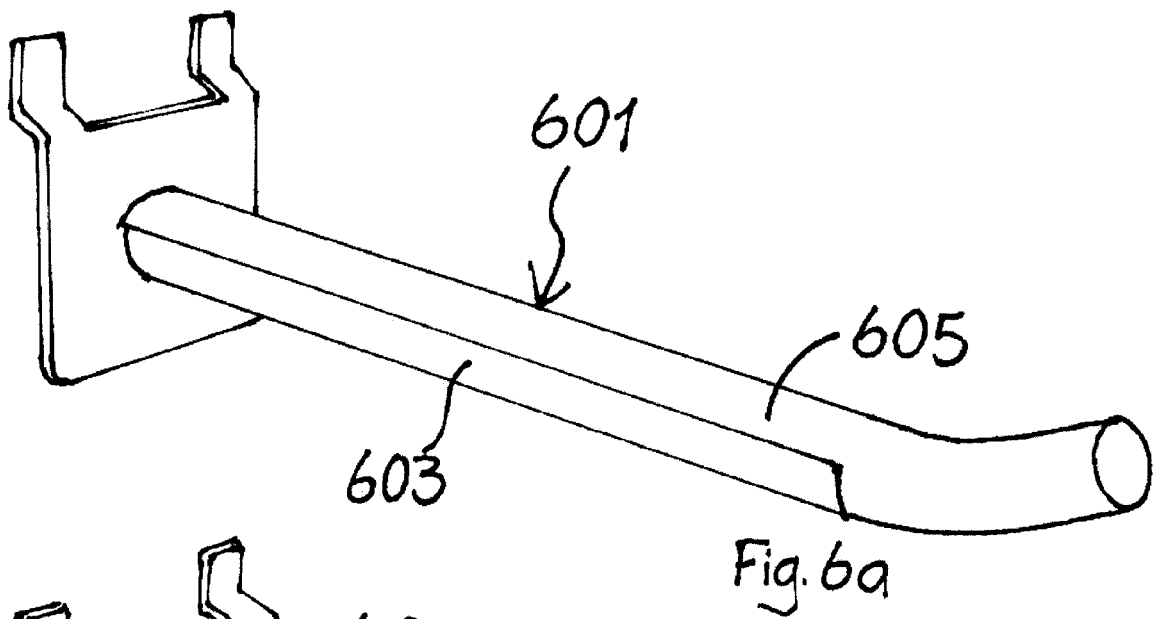


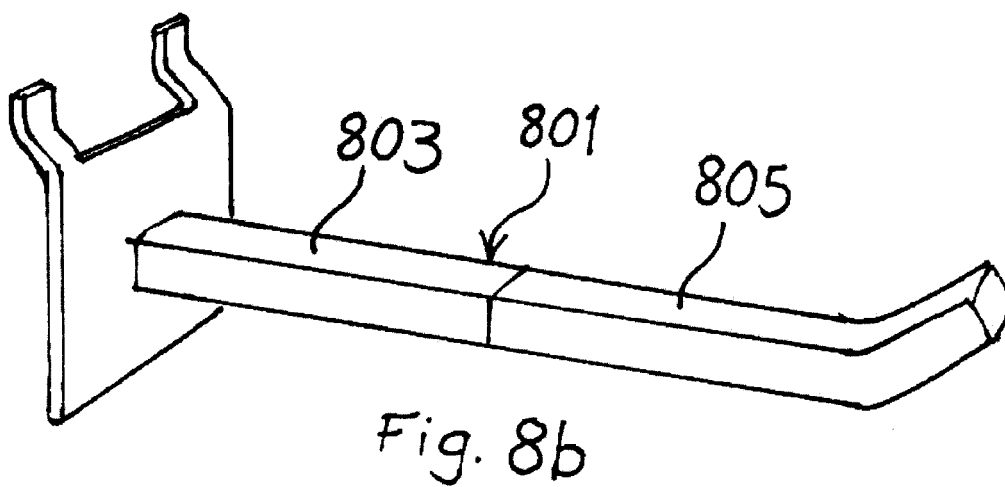
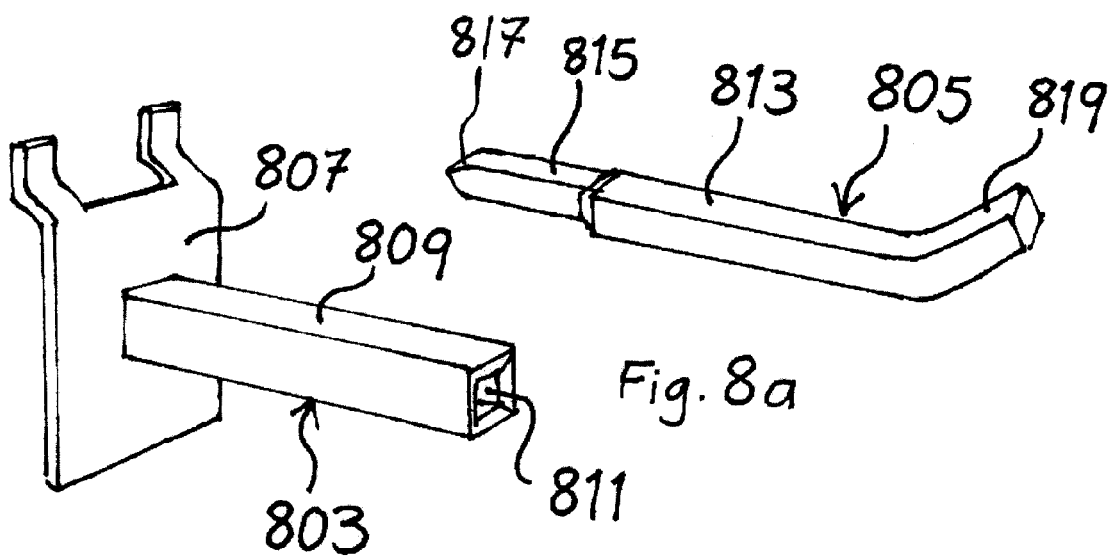


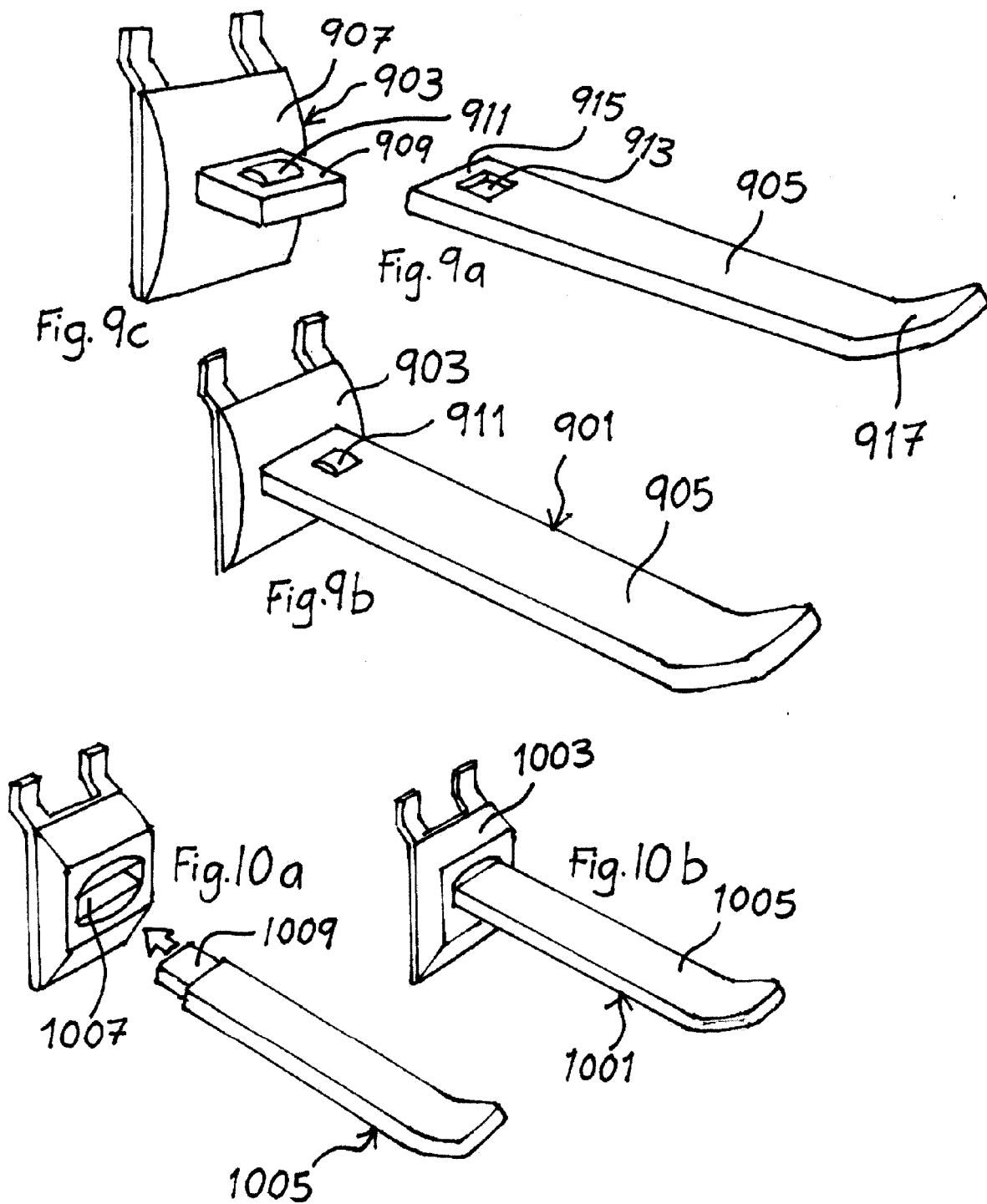














European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 11 3006

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 632 387 A (JOHNSON ET AL) 27 May 1997 (1997-05-27) * the whole document *	1-3,8-13	INV. A47F5/08
X	US 4 066 169 A (HOCHMAN ET AL) 3 January 1978 (1978-01-03) * the whole document *	1,8-10, 12,13,15	
X	DE 41 00 399 A1 (LDF GMBH, 5309 MECKENHEIM, DE) 16 July 1992 (1992-07-16) * the whole document *	1-4,8,14	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 May 2006	Examiner Alff, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

1
EPO FORM 1503 (03.02 (P04C01))

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

EP 05 11 3006

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.

12-05-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5632387	A	27-05-1997	US 5579927 A	03-12-1996
US 4066169	A	03-01-1978	NONE	
DE 4100399	A1	16-07-1992	NONE	

EPO FORM P0459

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