(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 22 September 2005 (22.09.2005)

PCT

(10) International Publication Number WO 2005/087336 A1

(51) International Patent Classification⁷: A45D 8/34

A63H 3/44,

English

(21) International Application Number:

PCT/GB2005/000917

(22) International Filing Date: 9 March 2005 (09.03.2005)

(25) Filing Language:

(26) Publication Language: English

(30) Priority Data:

0405470.6 11 March 2004 (11.03.2004) GH

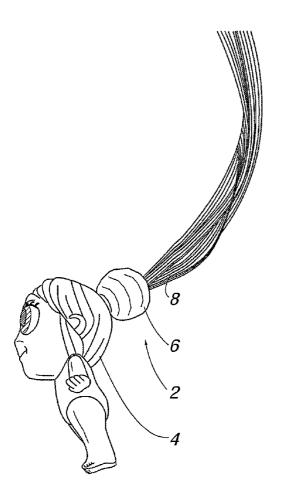
(71) Applicant (for all designated States except US): EVOLVE NPD LTD [GB/GB]; Ground Floor, 55 Bondway, Vauxhall, London SW8 1SJ (GB).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): CARTLIDGE, Peter [GB/GB]; Evolve NPD Ltd, Ground Floor, 55 Bondway, Vauxhall, London SW8 1SJ (GB). TYLER, Lucas [GB/GB]; Evolve NPD Ltd, Ground Floor, 55 Bondway, Vauxhall, London SW8 1SJ (GB). ROWE, Tim [GB/GB]; Evolve NPD Ltd, Ground Floor, 55 Bondway, Vauxhall, London SW8 1SJ (GB).
- (74) Agent: BAILEY WALSH & CO LLP; 5 York Place, Leeds LS1 2SD (GB).
- (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,

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(54) Title: TOY AND ACTIVITY PLAYTHING



(57) Abstract: The invention relates to a toy and in one aspect to a toy and in another aspect to apparatus for use therewith. The toy article includes a series of elongate members or strands which can be attached to one or a number of portions of a base and which are preferably longer than the length of the toy character. Typically the strands or members can be manipulated such as by braiding to each other or to a person's hair, and associated apparatus can be provided in conjunction with the strands or members to cause the braiding of the same.

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PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, 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, IS, IT, LT, 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

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Toy and Activity Plaything

The invention to which this application relates is a toy and activity plaything for use, primarily, by children or teenagers, to provide a play function and a finished article which can be subsequently used for decorative and/or practical effect.

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The provision of toys which provide an activity which can be entertaining to a child and/or a teenager, is continuously sought by manufacturers of toys and playthings. Areas in which children, particularly girls, are interested is the styling of hair and the provision of accessories for use with hair and/or jewellery.

However, at the present time, accessories which are available for purchase and use by children and teenagers, tend to be preformed inasmuch that the same are purchased and then placed in the hair to either provide a practical fixing of the hair in position and/or an attractive effect. This therefore means that these hair accessories do not actually provide any entertainment or allow any interaction between the child and the article.

The aim of the present invention is to provide a toy and plaything which allows an article to be created by the child and, during the creation of the same, to provide entertainment for the child. A further aim is to allow the article to be put to practical and/or decorative effect.

In a first aspect of the invention there is provided a toy article, said toy having a base including attachment means which allow a series of elongate members or strands to be attached to the base at at least one location to form the article.

In a first embodiment said elongate members or strands are connected at one end to a holder with attachment means which can be mounted on or adjacent to the surface of the base at which said elongate members or strands are to be provided. The attachment means can include at the base a first part which allows the location of a second part connected to the elongate members or strands in the form of a holder. It should be appreciated that the features described herein can be incorporated either in the toy article base directly or via a holder attached to the base.

In one embodiment, the elongate strands or members can be interchangeable with respect to the toy article so as to allow the selection of a particular appearance for the toy by the selective attachment of a group of elongate members or strands having a particular appearance.

In one embodiment the toy base is in the form of a model human or animal.

In one embodiment, the attachment means are a magnet in each of the base and holder or a magnet and magnetically attractive material.

Typically the area or areas to which the elongate members or strands can be attached is provided at a location where a child would expect to see hair located on the toy article.

In one embodiment, the toy article base includes a plurality of attachment means for selective attachment of elongate members or strands thereto. Alternatively the attachment means on the base extends over a defined area of the said article. Both embodiments allow the selective attachment and positioning of

the with the elongate members or strands with respect to the base.

Typically, the length of the strands or elongate members are longer and preferably significantly longer than the greatest dimension of the base.

Typically, the holder with the elongate members or strands can be provided to have a decorative effect and, in one embodiment, a plurality of holder portions and/or series of strands or elongate members can be provided for selective combination by the user. Typically the strands or elongate members can all be of one particular colour or can be provided as a series of differing colours, or differing materials. For example, in one embodiment they may be of hair or synthetic hair, or ribbon, or leather or any material can be used to form the strands or elongate members.

In one embodiment, engagement means are provided to allow a group of elongate members or strands to be attached to another group of elongate members or strands thereby providing a longer length, when joined end on end.

In a further aspect of the invention, the toy article with the elongate members or strands can be used as a decorative and/or functional item.

In one embodiment, the toy is attachable to a person's hair or clothing by locating means which can be provided on the toy such as by suitable clipping means. Yet further, the toy can be attached to a person's hair by the braiding of the person's hair with the elongate members or strands which are attached to the article. In either event, the article can then be used as a decorative attachment by the person.

In a further embodiment, the toy can be used as a necklace to be worn around the neck or as a bracelet to be worn around the wrist or as any other band form to be worn. In one embodiment this is by attachment to another article such as a chain or by the separation of the set of elongate members or strands into two or more portions and then the attachment together of the free ends of the portions to form a loop which passes around the neck or wrist of the wearer.

In one embodiment, specific attachment means can be provided which allows the attachment together of the free ends of the portions of elongate members or strands.

In a yet further embodiment, the model figure can be used as a bracelet or necklace as described but the article can be placed into a further article which is suspended along with the article by the strands so as to form the necklace.

In one embodiment accompanying articles can be provided to be used in conjunction with the toy article. In one embodiment, the accompanying articles include a brush or comb which can be used by the child to comb or style the strands. In a further embodiment colouring materials may be provided to allow the selective colouring of the elongate members or strands. In addition, or alternatively, items to allow typical hair salon activities to be mimicked on the strands can be provided, especially when the strands or elongate members are provided to depict hair.

In a further embodiment, a series of beads can be provided along with a threading means which allow the beads to be threaded onto the strands and thereby provide a decorative effect. In one embodiment the toy article is provided with an item attached to or formed as a part of the toy and typically at or adjacent to the location on the base including the strands or elongate members and which can be used as a storage location for at least part of the length of the elongate members or strands. In another embodiment a cavity is provided within the toy article base which can be used for storage of the elongate members or strands.

In a further aspect of the invention, there is provided a toy, said toy including a toy article, provided with a series of strands or elongate members, and apparatus for allowing the strands or elongate members to be braided, said apparatus comprising a stand for receiving the article and support means which are spaced apart, each support means providing a location for a portion of said elongate strands or members to pass therethrough, as relative rotational motion occurs between the stand and support means, thereby causing the portions of the strands or elongate members to be progressively braided together.

Typically, the elongate strands or members can be split into as many portions as are provided support means. In one embodiment it is the stand and article therein which are rotated.

The elongate strands or members which are braided together can be connected to a common holder or alternatively, a series of holders are located on the article and the elongate strands or members of the respective holders are braided together.

In addition to the provision of the braiding, beads can also be placed onto the strands via the apparatus.

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In one embodiment the toy article is provided with a winding mechanism which allows the selective extraction and/or retraction of the elongated members or strands between a storage position in which the same are retracted, at least partially, to a position within the base, and an in-use position in which the elongate members or strands extend from the base to a desired length.

Typically, the apparatus which is provided is in the form of a play environment which is linked to the appearance of the article. In one embodiment, the apparatus is adaptable between a first condition and a second condition in which manipulation of the elongate strands or members can occur. series of different apparatus sets are available and the sets have matching engagement means so as to allow the sets to be joined together selectively to form a larger play environment.

In a further aspect of the invention there is provided a toy article, said article having a base, and a series of elongate members or strands, said elongate members or strands attached to the base, and wherein the majority of the elongate members or strands are of a length which is greater than the largest linear dimension of the base.

invention is now described with reference accompanying drawings, wherein:-

Figure 1 illustrates a side view of a toy article in accordance with the invention in one embodiment;

Figure 2 illustrates a series of toy articles in accordance with embodiments of the invention;

Figure 3 illustrates in detail, the arrangement between the article and the holder for the strands;

Figure 4 illustrates a series of strands and holders which can be selectively positioned with respect to the article;

Figures 5a-b illustrates a series of toys in accordance with the invention being worn for decorative effect;

Figures 6a-b illustrates a further embodiment of the invention as a decorative article;

Figures 7a-g illustrates the ability to attach beads to the strands of the invention;

Figure 8 illustrates one embodiment of apparatus in accordance wit the invention;

Figure 9 illustrates a further embodiment of apparatus in accordance with the invention;

Figures 10a-d illustrate a further feature of the invention in one embodiment in which the strands or elongate members are in the form of portions of fabric;

Figures 11a-d illustrate a further embodiment of the invention;

Figures 12a-c illustrate the characters in accordance with the invention being worn; and

Figures 13 14 and 15 illustrate the characters and associated apparatus for play environments to be created.

Referring firstly to Figure 1 there is illustrated a toy article in accordance with one embodiment of the invention. The toy article 2 includes a base 4, a holder 6 and a series of elongate members, or strands hereinafter referred to in a non-limiting manner as strands 8 which depend from and are held in position by the holder 6. In this case and in all of the embodiments shown, the toy article is in the form of a stylised girl but it should be appreciated that the toy article can depict any character as required for the particular purpose of the toy or plaything. It is also shown how the length of the strands 8 is greater than the length of the base 4 thereby providing the unused visual effect.

Figure 2 illustrates three of said toys each comprising a base of the form of a model figure 4, a holder 6 and strands 8. In each case it will be readily seen that the length of the strands are significantly greater than the length of the model figure. In the article 2' the same has two holders 6 and two groups of strands 8 attached thereto and it will therefore be appreciated that one or a plurality of holders can be selectively positioned with respect to the model figure in a manner as will now be described with reference to Figures 3 and 4.

Typically, the model figure base 4 is provided with a portion on which hair is already depicted. In this embodiment, it is the head portion 10. At a location typically on this area, or alternatively at a series of locations (not shown) the first part of the attachment means is provided. In this case, the attachment means is a magnet or magnetically attractive material 12 which is provided at the surface but equally could be embedded within the model figure, or could be other attachment means such as a press stud or the like. It should be appreciated that the strands 8 and holder 6 (which includes the second part of the attachment means) as well as breaking the free ends of the

strands 8 can be permanently provided on the toy article in an alternative embodiment.

In order to selectively position the strands to the base 4 and thereby form the toy 2, the holder 6 is moved by the child as indicated by arrow 14 in Figure 3 towards the magnet or magnetic attractive material 12. The holder includes or is formed as a magnet or if the attachment means 12 is a magnet, of magnetically attractive material. In any case, a magnetic field is created between the holder 6 and the attachment means 12 on the toy character so as to cause attachment of the holder with As shown in Figure 4, the holder includes the strands 8 attached thereto. Figure 4 also illustrates how there can be provided a series of holders and strands for selective attachment to the toy article and how each of the strands for each of the holders can be of a different configuration, colour or length. Thus, there is provided a kit, in accordance with the invention whereby the kit includes at least one toy article base 4 and a series of holders 6 and respective groups of strands 8 therewith for selective application to the said base.

If required, each of the strands can be attached end-on-end to form a single set of strands of a longer length. This can be achieved by the attachment of an engagement means such as a magnetic bead 16 to the free end of a first group of strands and then bringing the magnetic bead 16, which is shown attached to one of the strands in broken lines adjacent, towards the holder 6' of Figure 4. The magnetic attraction between the holder 6' and the magnetic beads 16 thereby allows the strands to be connected end-on-end. Furthermore, another magnetic bead 16', as shown in Figure 4, can be located to the strands which are attached to the holder 6' and then the magnetic beads 16' can be brought into location with the holder 6" so as to form a series of strands end-on-end.

Figure 5a illustrates how the toy 2 can be used to decorative effect. In Figure 5 there is shown a child wearing three of the toys 2 in their hair and this is typically achieved either by providing location means on the model figure base 4 or the holder 6 which allow the same to be attached to the hair. Alternatively, and not shown in this embodiment, portions of the strands 8 can themselves be braided into the hair of the child to allow the combined article to be attached to the hair.

A further use of the toy for decorative effect is shown in Figure 5a and the toy 2' is provided as a necklace with the base 4 forming the portion at the front of the necklace and supported by either two groups of strands which are located on the base or alternatively, a group of strands which has been separated into two sub groups 8' and 8" which respectively pass round either side of the child's neck. The free ends of the respective groups of strands 8' and 8" can then be joined at the rear of the child's neck typically by the provision of magnetic beads 16 as described in Figure 4 which can be magnetically attached together. However, any suitable attachment means can be used to join the ends of the strands 8', 8" and thereafter joined together to form a necklace. Any suitable attachment means can also be used between the article and the holder.

Figure 6a illustrates a further variation on the provision of a necklace and in this case, the toy 2 again comprises a base 4 with a holder 6 locating groups of strands 8' and 8". In this case the model figure 4 is located with another item in this case in the form of a carriage 20 and the base 4 is retained within the carriage by means of the strands 8' and 8" passing through an aperture 22 as shown to form a decorative pendant comprising the base of figure 4 and the carriage 20. Also shown, in Figure 6b, is the provision of a further component which can be used

in conjunction with the article of figure 2. The component is in the form of a character 24 which is convertible between a first position and a second position 24' where the portion 26 can be moved as indicated by arrow 28 to a position so that the same can be used as a brush and in turn used to brush the strands 8 of the character 2.

In all of the uses where additional components are provided it is envisaged that the components will be dimensioned i.e. be tall and thin, so as to emphasise the length of the strands.

Figures 7a-c illustrate how a series of beads, whether magnetic beads 16 as previously described or otherwise, can be attached to the strands 8 by means of a threader device 28. The threader device 28 is first located in an open position as shown in Figure 7a with respect to the strands 8 which are positioned to pass over the threader as shown. The threader arms 30, 32 are then moved together as indicated by arrows 34 to the position shown in Figure 7b. In this position, the bead 16 is moved over the free ends of the arms 30, 32 as indicated by arrow 36 and then passes to the base 38 of the threader 28 to be threaded onto the strands 8 as illustrated in Figure 7c. When threaded the beads can continue to be passed downwardly as indicated by arrow 40 on the strands 8 to the required position whereupon the bead threader 28 can be removed by moving apart the arms 30, 32 and removing the same from strands 8. Figure 7d illustrates a further arrangement where attachment means 115 are provided part moulded to the portion 117 of the toy character. These attachment means can be opened to receive sets of strands 119 selectively and, when closed, allow the selected strand set to be retained on the portion 117 to provide the desired visual effect.

Figures 7e -g illustrate various embodiments of the manner in which respective strands or elongate members may be joined

together to form longer lengths or have sets which are joined but offset. In Figure 7e, respective strands 123 and 125 are attached together via magnetic beads 127 provided at their free ends which are attracted together and hence also serve to attach together the toy characters 129, 131. In Figure 7f a set of strands 133 is shown being clamped around another set of strands 135, intermediate the ends of the same via bead arrangement in the form of a clip 137.

In Figure 7g the sets of strands 139, 141 are in the form of chains joined together via magnetic beads 127 and also illustrate to attach further items 143, which, in this embodiment can be inserted in one of the links of the chain via formation 145.

Figures 8 and 9 illustrate braiding apparatus in accordance with the invention and said braiding apparatus, in both embodiments, illustrates a play environment 50 which is designed to suit particular play styles and can include a number of features such as for example mirrors 52, brushes 54 for use with the strands and other articles which typically, would be expected to be seen in a dressing room, with the style of the environment being linked to the appearance of the toy article 2.

The apparatus can be used to provide braiding of the strands and the apparatus includes a stand 56 on which the base 4 can be placed to allow the braiding to occur. A drive means 58 is provided to allow the stand to rotate or be rotated. In addition, support means 60, 62 as illustrated in Figure 8, are provided, with said support means spaced apart as shown and each provided to receive a portion of the strands 8 and support the same in position.

Thus, in use, the stand 56 with the model figure base 4 located thereon is rotated as indicated by arrow 64 and as it rotates the

respective strand portions 8 are relatively twisted together from the support means and pass towards the base and stand as indicated by arrows 66. The stand portions are held substantially above the top of the base 4 so as not to become intertwined with the figure. Because of this, and the rotation of the model figure base 4, the strands are twisted or braided together and this rotation continues until either the required length of braiding has been achieved or all of the strands have been braided, thereby braiding all of the length of the respective groups of strands.

In Figures 10a-d there is illustrated a further embodiment of the toy article in accordance with the invention. In this embodiment the strands or elongate members are provided in the form of fabric lengths 201. In Figures 10a, b and d the fabric lengths are provided with clips 203 at their free ends which allow the attachment of the same, selectively to a persons hair or clothes to provide a decorative effect. In addition, in Figures 10a and b lengths 201 include a series of popper fasteners 205 which can be selectively interengaged as shown at 207 in Figure 10b. The selective interengagement allows the lengths to be shortened, crossed over or linked.

In Figure 10c the lengths 201 are provided with apertures 209 which allow the reception and threading of a cord 211 to allow the lengths 201 to be connected.

In Figures 11a-d there is provided a further embodiment of the invention where there is illustrated the portion, 225 of the toy character to which the sets of strands 227 are attached. In addition in accordance with this embodiment the portion includes an item 229 which may be integral or attachable.

In Figures 11a and c there is shown the same item 229, with the strands arranged to be free (Figure 11a) and with one set of strands wound around the item (Figure 11c), respectively. In Figures 11b and 11d there is shown another item 229 with the strands free (Figure 11b) and with one strand wound around the item (Figure 11d). It should be appreciated that the provision of the item 229 provides a further play possibility for the child and also allows the strand set(s) to be moved to a storage position as illustrated in Figures 11c and d.

Figures 12a-c illustrate three arrangements of toy articles 300 in accordance with the invention with the elongate members or strands depending therefrom being used as attachment articles to a person 302 to provide a decorative effect, individually and in combination.

In Figure 13-15 there are illustrated further components 306 which can be used to depict play environments or which can receive the toy characters 300 therein to provide additional play options for the child playing with the toy characters.

It will therefore be appreciated that by providing the toy as herein described, so there is provided a toy which is decorative and performs a function such as, for example, holding a user's hair in position, and also provides entertainment and activity play in forming the combined article.

Claims

- 1. A toy article said toy having a base including attachment means which allow a series of elongate members or strands to be attached to the base at at least one location to form the article.
- 2. A toy according to claim 1 wherein said ends of the elongate members or strands are connected to a holder with attachment means which allow the same to be selectively attached to the toy base.
- 3. A toy according to claim 2 wherein the attachment means are provided on the base and the holder and said elongate members or strands depend therefrom.
- 4. A toy according to claim 1 wherein the attachment means comprise a first part located on the base and a second part in the holder to which the elongate members or strands are attached and which holder can be selectively positioned with respect to the said first part.
- 5. A toy according to claim 4 wherein the holder and/or strands or elongate members are removable and interchangeable with respect to the toy base.
- 6. A toy according to any preceding claim wherein the base is in the form of a model human or animal.
- 7. A toy according to claim 4 wherein the elongate members or strands are attached to the base via a holder, which is magnetically attracted to the first part of the attachment means on the base.

- 8. A toy according to claim 7 wherein the base includes a plurality of magnetic or magnetically attractive attachment means to allow the selective location of the second part of the attachment means thereon.
- 9. A toy according to claim 7 wherein the attachment means are provided across a defined area of the base to allow the selective attachment of the holder at a selected location on said defined area.
- 10. A toy according to claim 1 wherein the length of the strands or elongate members is greater than the longest dimension of the base.
- 11. A toy according to any of the preceding claims wherein elongate members or strands are provided to have a decorative effect when used in combination.
- 12. A toy according to any of the preceding claims wherein the elongate members or strands are in the form of real or synthetic hair.
- 13. A toy according to any of the preceding claims wherein the toy article is provided with location means to allow the toy to be attached to a person's hair or clothing.
- 14. A toy according to any of the preceding claims wherein the toy can be attached to a person's hair by the braiding of the person's hair with the elongate members or strands.
- 15. A toy according to any of the preceding claims wherein a first group of elongate members or strands are provided with engagement means to allow attachment to another group of elongate members or strands.

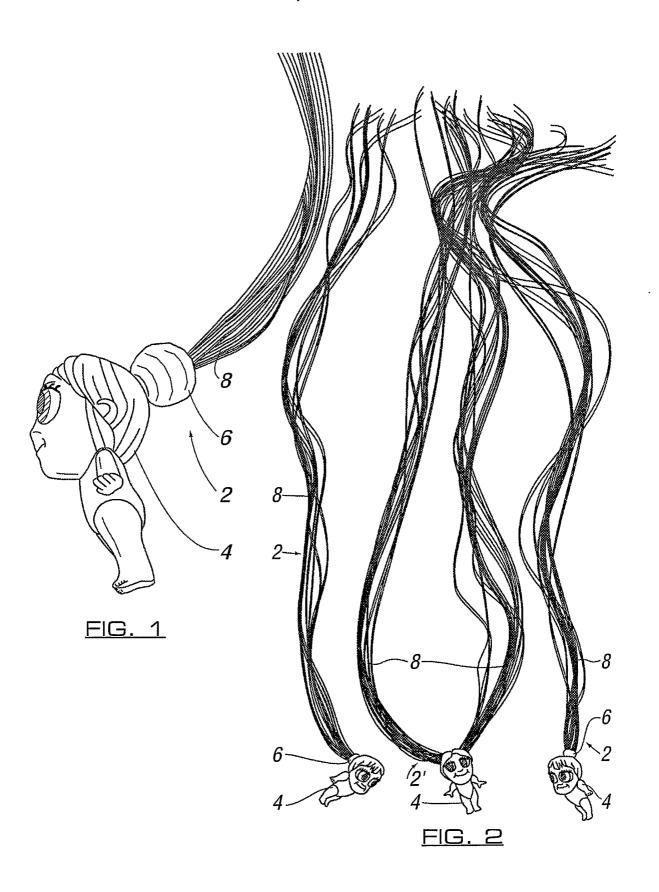
- 16. A toy according to claim 13 wherein the elongate members or strands attached to the toy can be separated into two portions and the free ends of said respective portions joined together to form a loop.
- 17. A toy according to any of the preceding claims wherein the elongate members or strands can be used to receive one or a plurality of beads which are threaded along said strands.
- 18. A toy according to claim 1 wherein the winding mechanism is provided which allows the selective extraction and/or retraction of the elongate members or strands between a storage position in which the same are retracted at least partially to a position within or on the base or holder and an in-use position in which the elongate members or strands extend from the base to a desired length.
- 19. A toy, said toy including a base with a series of strands or elongate members attached thereto, and apparatus for allowing the strands or elongate members to be braided, said apparatus comprising a stand for receiving the base and support means which are spaced apart, each support means providing location for a portion of said elongate strands or members to pass therethrough as relative rotational motion occurs between the stand thereby causing the portions of the strands or elongate members to be progressively braided together.
- 20. Apparatus according to claim 19 wherein the stand and base are rotated.

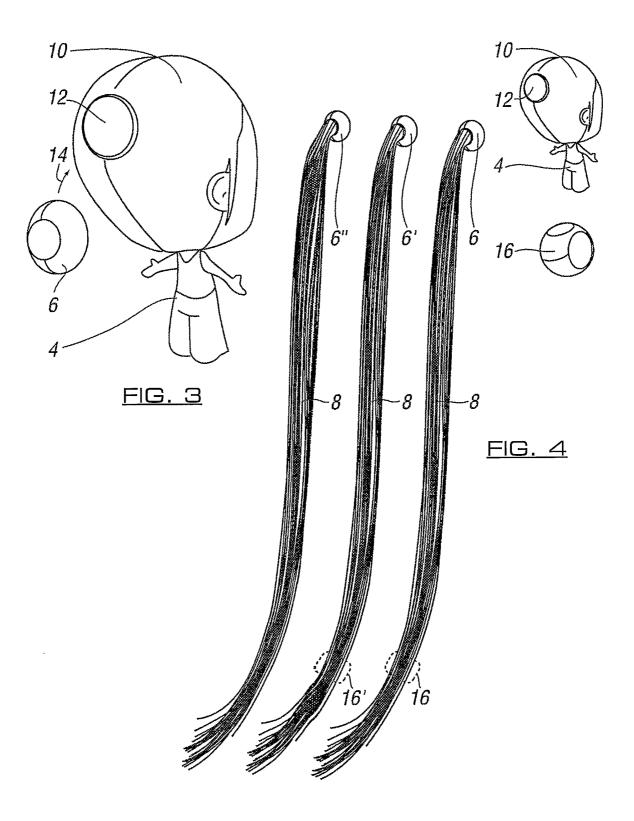
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- 21. Apparatus according to claim 19 wherein the elongate strands or members which are braided together are connected via a common holder to the toy character.
- 22. Apparatus according to claim 19 wherein a series of holders are located on the toy character and the elongate strands or members of the respective holders are braided together.
- 23. A toy article, said article having a base, and a series of elongate members or strands, said elongate members or strands attached to the base, and wherein the majority of said elongate members or strands are a length which is greater than the largest linear dimension of the base.
- 24. A toy article according to claim 23 wherein the largest linear dimension of the base is the length of the same.
- 25. A toy article as hereinbefore described with reference to the accompanying drawings.
- 26. A toy as hereinbefore described with reference to the accompanying drawings.





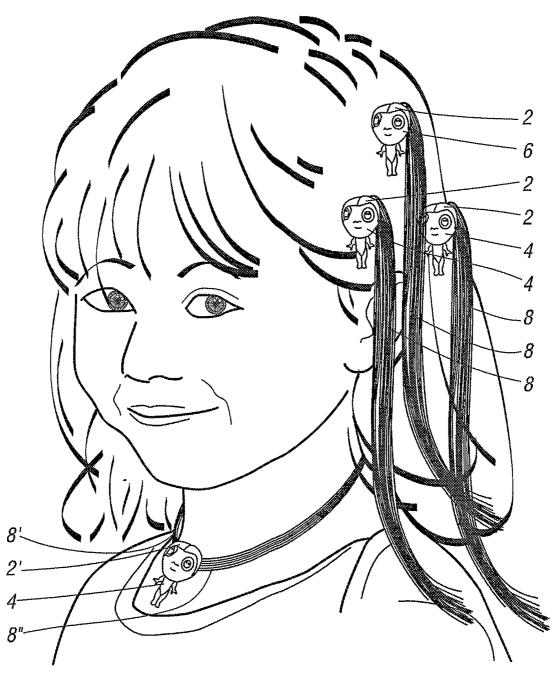
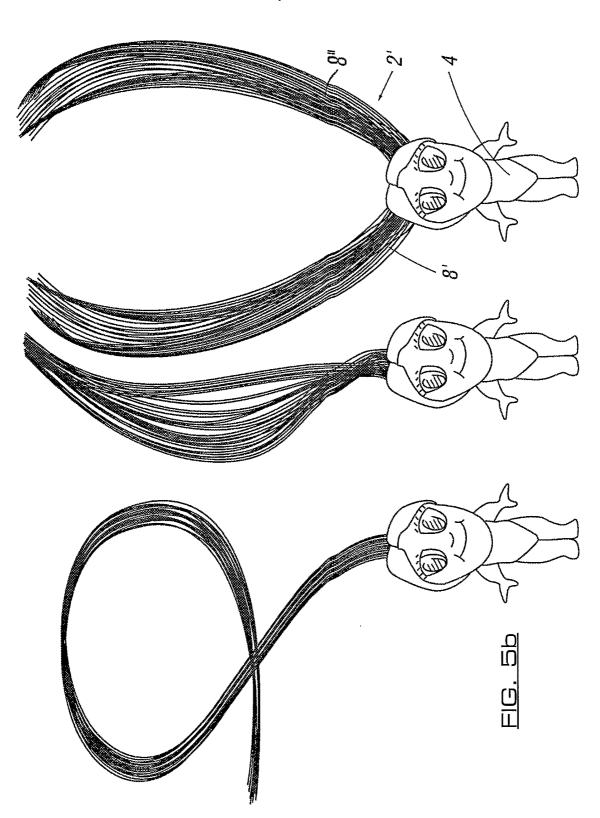
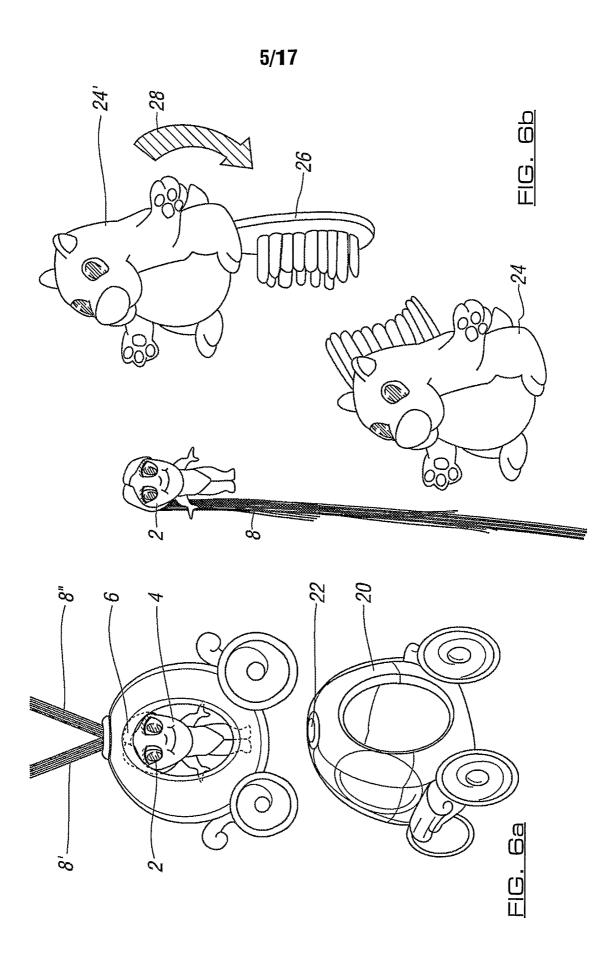
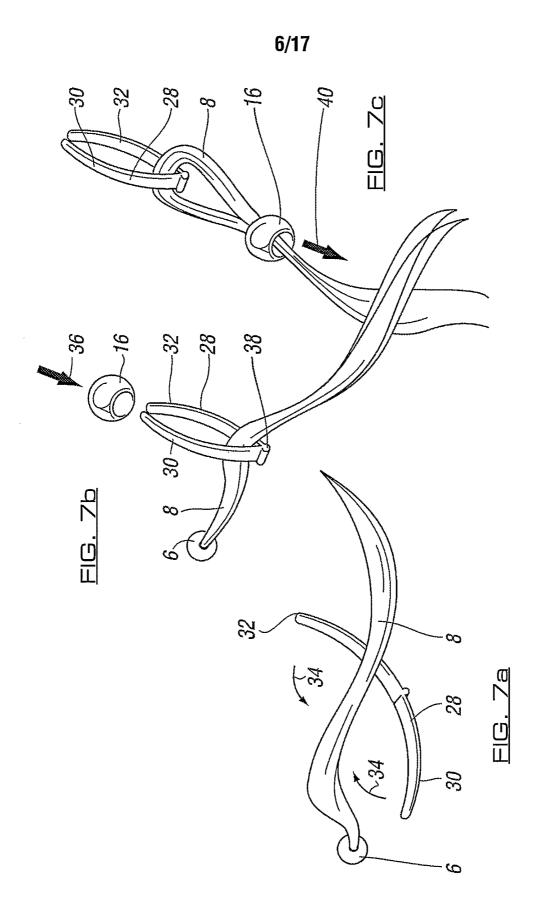


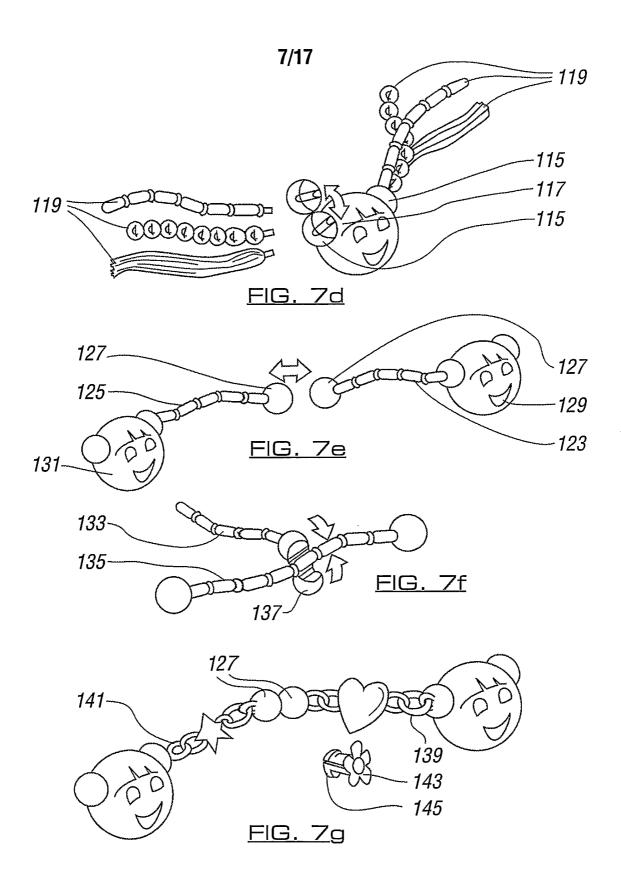
FIG. 5a

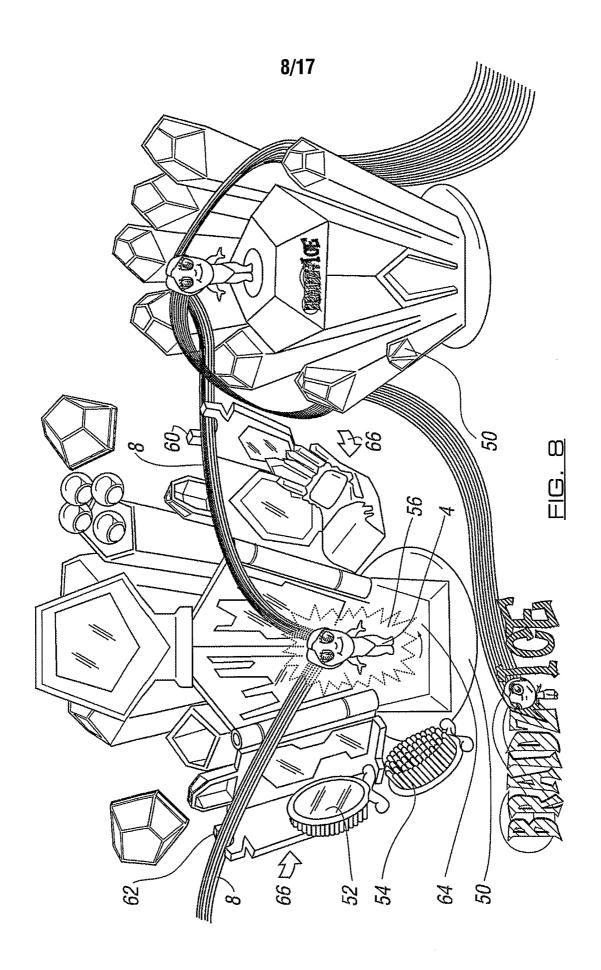


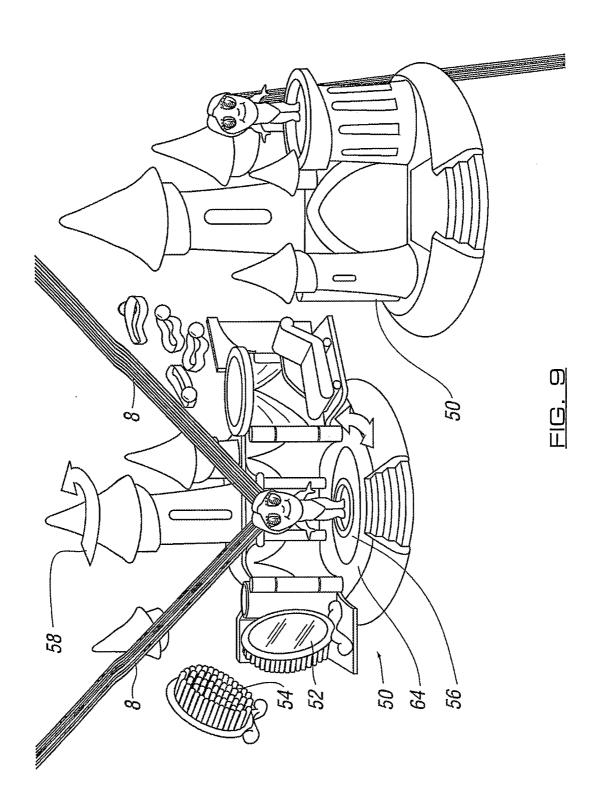


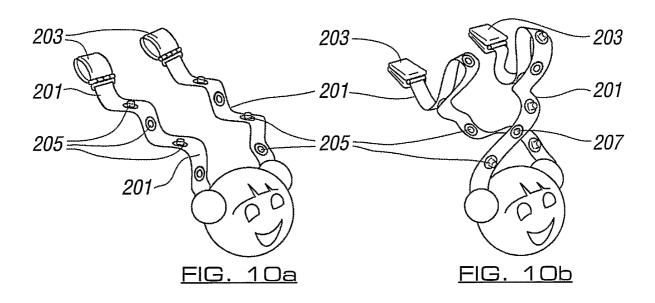


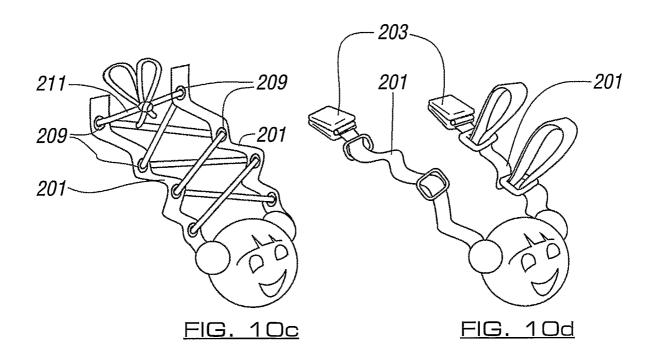


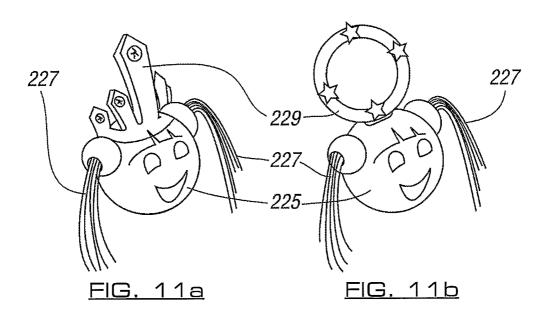


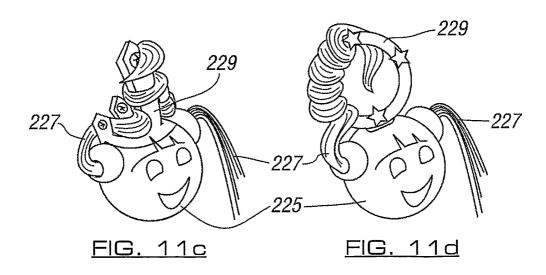


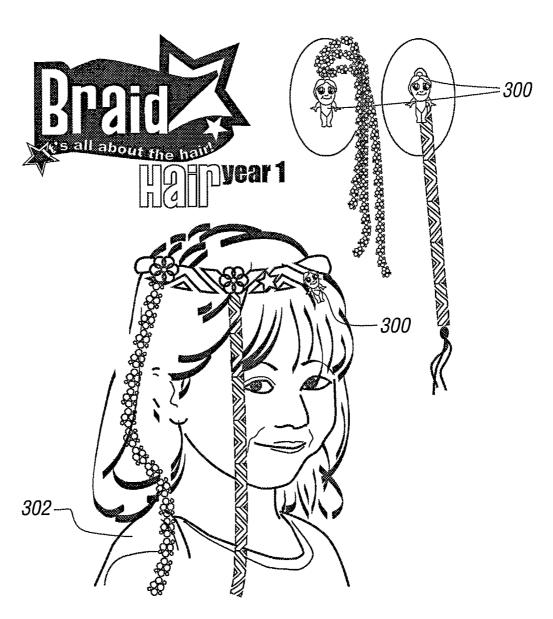






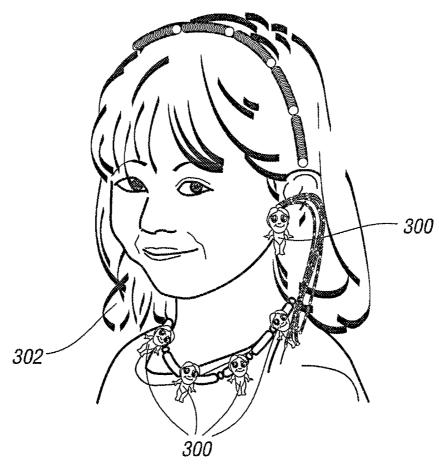






<u>FIG. 12a</u>





<u>FIG. 12b</u>

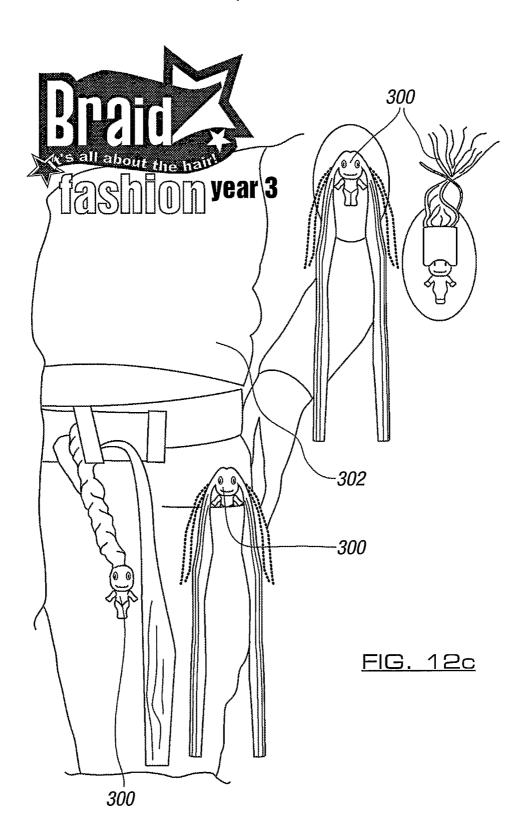




FIG. 13

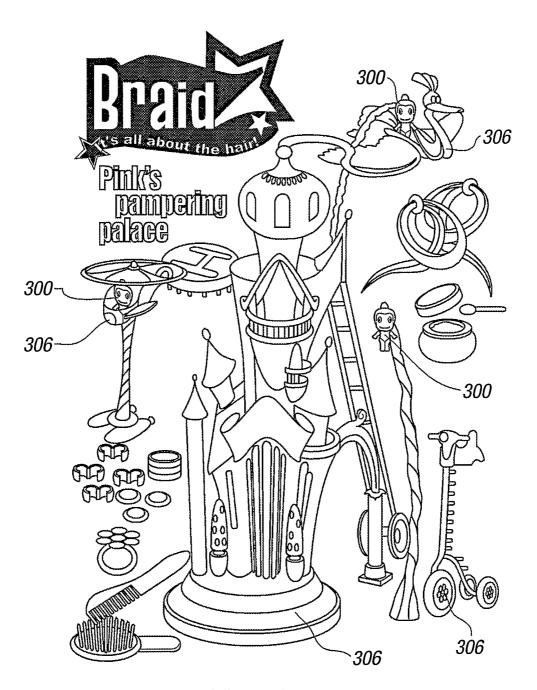
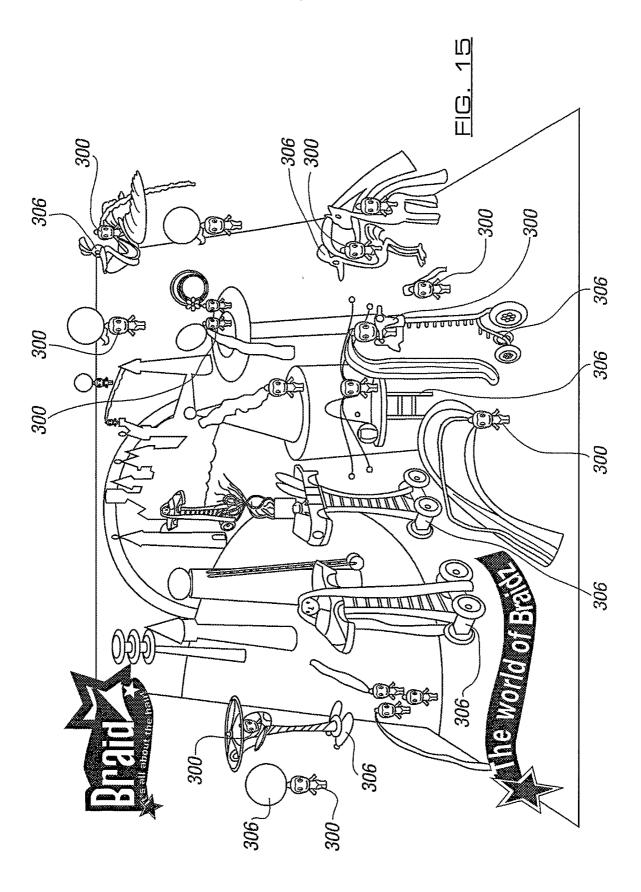


FIG. 14



INTERNATIONAL SEARCH REPORT

	INTERNATIONAL SEARCH	LI OICI	PCT/GB2005/000917		
A. CLASSI IPC 7	FICATION OF SUBJECT MATTER A63H3/44 A45D8/34				
110 /	Neono, 44 Neono, 54				
According to	o International Patent Classification (IPC) or to both national class	sification and IPC			
	SEARCHED	modicina di C			
Minimum do	ocumentation searched (classification system followed by classific A63H A45D	cation symbols)			
110 /	Noon Mob				
Documenta	tion searched other than minimum documentation to the extent th	at such documents are inclu	ded in the fields searched		
Electronic d	lata base consulted during the international search (name of data	base and, where practical,	search terms used)		
EPO-In	ternal, WPI Data, PAJ				
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the	relevant passages	Relevant to claim No.		
Х	US 3 279 122 A (BLENNER LOUIS)		1-12,14,		
Λ	18 October 1966 (1966-10-18)	17,23,24			
Y	column 2, line 33 - line 44; fi	18			
X	US 3 210 884 A (SHARFF MARY A E	T AL)	1-12,14,		
Υ	12 October 1965 (1965-10-12) column 2, line 12 - line 41	17,23,24			
ı	column 3, line 14 - line 33		18		
	figures 1,2				
χ	US 5 607 338 A (LANDI ET AL)		1-6,		
	4 March 1997 (1997-03-04)		10-12,		
			14,16, 17,23,24		
Y	column 4, line 65 - column 5, l	ine 44;	8,9,18		
	figures 6-8				
		-/			
χ Furti	her documents are listed in the continuation of box C.	χ Patent family m	embers are listed in annex.		
	ategories of cited documents;				
·	ent defining the general state of the art which is not	or priority date and	shed after the international filing date not in conflict with the application but		
consic	dered to be of particular relevance document but published on or after the international	invention			
filing o	date ent which may throw doubts on priority claim(s) or	cannot be consider	"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		
which cita ti o	is cited to establish the publication date of another n or other special reason (as specified)	"Y" document of particul cannot be consider	ar relevance; the claimed invention ed to involve an inventive step when the		
other i	ent referring to an oral disclosure, use, exhibition or means	document is combi ments, such combi in the art.	ned with one or more other such docu- nation being obvious to a person skilled		
later th	ent published prior to the international filing date but han the priority date claimed	of the same patent family			
Date of the	actual completion of the international search	Date of mailing of th	e international search report		
3	1 May 2005	09/06/20	09/06/2005		
Name and r	mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer	Authorized officer		
	NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl,	Tuoma Da	onugo P		
L	Fax: (+31–70) 340–3016	Turmo Pe	eruya, K		

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	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	US 5 299 968 A (BENNETT ET AL) 5 April 1994 (1994-04-05)	1-6, 10-14, 16,17, 23,24
Y	figures 	8,9,18
X	FR 2 537 880 A (BERCHET INDUSTRIE SA) 22 June 1984 (1984-06-22)	1-6, 10-12, 14,16, 17,23,24
Υ	abstract; figures	8,9,18
Y	US 3 162 976 A (BEEBE HERBERT R ET AL) 29 December 1964 (1964-12-29) the whole document	18
X	US 3 808 736 A (TERZIAN R,US ET AL) 7 May 1974 (1974–05–07) the whole document	19-21
A	US 5 988 181 A (GABLE ET AL) 23 November 1999 (1999-11-23) the whole document	19

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 25,26

Claims 25 and 26 refer to the drawings and do not define the technical features for which protection is sought. The subject-matter of these claims is therefore not clear (Art. 6 PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Box 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:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. X Claims Nos.: 25,26 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: see FURTHER INFORMATION sheet PCT/ISA/210
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 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:
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 an additional fee, this Authority did not invite payment of any additional fee.
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.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
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US 3210884	<u>А</u>	12-10-1965	NONE		
US 5607338	A	04-03-1997	NONE		
US 5299968	Α	05-04-1994	NONE		
FR 2537880	Α	22-06-1984	FR	2537880 A1	22-06-1984
US 3162976	Α	29-12-1964	NONE	<u> </u>	
US 3808736	A	07-05-1974	AU CA GB JP	6138073 A 984151 A1 1411049 A 49103733 A	17-04-1975 24-02-1976 22-10-1975 01-10-1974
US 5988181	A	23-11-1999	CA GB	2269164 A1 2344994 A	23-06-2000 28-06-2000