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(71) Applicant: **Orlandini, Orlando**
50020 S. Casciano Val Di Pesa, Firenze (IT)

(72) Inventor: **Orlandini, Orlando**
50020 S. Casciano Val Di Pesa, Firenze (IT)

(74) Representative: **Mannucci, Michele et al**
Ufficio Tecnico Ing.A. Mannucci,
Via della Scala 4
50123 Firenze (IT)

(54) Manufactured article for garments, clothing accessories, pieces of jewelry, bags and other items, made from a woven fabric in wich chains take the place of yarns

(57) The manufactured article consists of a woven fabric made up of warp and weft threads which consist of flexible chains made of metal or other materials instead of yarns.

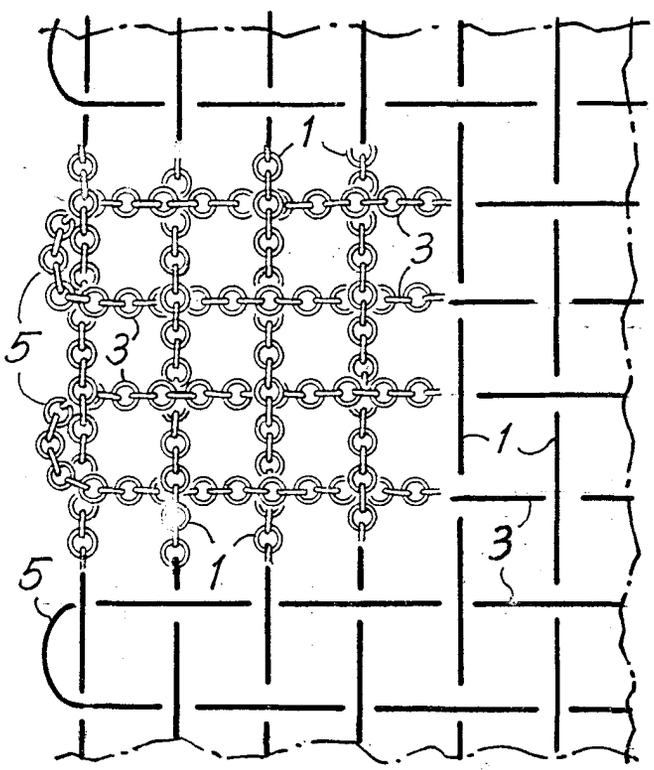

Fig.1

EP 1 036 868 A1

Description

[0001] The invention relates to a manufactured article designed to be used in the production of items of clothing or decorative items such as jewelry, bags, watch straps, garments, footwear, belts or any other item in which at least some of the parts have to be made from a relatively soft fabric.

[0002] Essentially, the basic manufactured article from which the garments, clothing accessories, etc. according to the invention are made, consists of a woven type fabric, i.e. one made up of warp and weft threads which consist, at least in part, of flexible chains made of metal or other rigid materials instead of yarns. In practice, the manufactured article can consist entirely of chains which are used to form both the warp and weft threads.

[0003] The fabric can be produced using a conventional loom - whether hand- or machine-operated - and can be made in a plain weave or alternatively in a patterned weave programmed in any known manner using a heddle system, Jacquard system or other similar known weaving techniques.

[0004] When producing the woven manufactured article the shape of the object to be produced may be taken wholly or partly into consideration; particularly, for example, when producing an article in the form of a strip, when a strip of woven fabric can be woven with its selvages (i.e. the edges where the weft threads are woven back in the opposite direction) spaced a certain distance apart, this distance corresponding to the width of the article to be produced, so that by cutting the strip transversely to the desired longitudinal dimensions, an item such as a bracelet can be formed directly from a continuous woven strip, the cut ends being provided with suitable elements which secure the fabric and complete the bracelet.

[0005] A manufactured article can also be obtained from a woven fabric using at least part of an edge delimited by the selvage.

[0006] Alternatively, an item may be formed by cutting into a relatively very wide strip of woven manufactured article, with the edge of the part to be used formed by cutting the woven fabric. In this case it would be expedient to secure the fabric by means of welding, adhesive bonding or other fastening means designed to prevent the fabric from fraying along its cut edges. The cut edge of the manufactured article can also be secured using elements which constitute decorative or functional accessories, such as clasps or fastenings in the case of a necklace or similar item.

[0007] When metal chains are used their surfaces can be treated in any desired manner in order to meet esthetic requirements, for example the surfaces can be diamond-cut or hammered or frosted or treated in some other way, including undergoing treatments to distinguish them chromatically by giving them various colorations or by using different raw materials such as gold, silver or other material.

[0008] A manufactured article can be produced so that the overall density of the fabric is uniform or varies as a result of the pattern and/or the properties of the threadlike elements used to form the warp or weft threads, and/or also by suitably varying the distance between the threadlike elements used as the warp and/or weft threads.

[0009] The invention also relates to products that use the manufactured article in question as defined above.

[0010] A better understanding of the invention will be gained by following the description and the appended drawing which illustrates a practical and non-limiting example of said invention. In the drawing:

Fig. 1 illustrates a portion of fabric, part of which is delimited by the structure showing the chain configuration and part of which is illustrated graphically in a more schematic manner;

Fig. 2 illustrates a piece of jewelry in the form of a strip made using a portion of fabric woven as a strip;

Fig. 3 illustrates a manufactured article formed entirely by means of cutting, i.e. by cutting it out of a strip of fabric which is wider than the dimensions of the article to be formed;

Figs 4 and 5 illustrate a fabric formed using a chain of the so-called "bead" type, and a detail on an enlarged scale of said "bead" chain.

[0011] As is illustrated in the drawing, the fabric is made up of warp threads 1 and weft threads 3 woven on a loom and, as can be seen in the diagram of Fig. 1, is a plain-weave type fabric, although it can also be woven in special configurations to meet esthetic requirements using known techniques, for example relating to the way in which the set of warp threads 1 are laid out and spaced out, or by using weft threads selected from a group of chain filaments having differing characteristics. The patterned weave can also be achieved by manipulating the warp heddles and the selection of weft threads, using weaving techniques of the type which produce a patterned weave programmed by means of heddles and selection of weft threads, or even by selecting the threads in the manner of a Jacquard system or other equivalent means. Clearly the use of chains - which is characteristic of the basic woven fabric - dictates a choice of particularly flexible materials and ones which are for the most part relatively very thin and, where appropriate, of differing sizes depending on the requirements of each article to be produced.

[0012] It has been found, surprisingly, that a woven fabric formed using metal chains or at any rate chains made of hard materials but which, overall, form chains that are very flexible, makes it possible to produce manufactured articles that are extremely flexible and whose weight per unit of surface area is even relatively very small, and in which the density of the weave can vary from a very tight weave to a relatively very open weave,

and even with areas - usually in the form of strips - of varying density. It is also possible when forming the fabric to provide a means of fastening together the points at which the warp and weft threads intersect, using adhesives or welding or some other means, with the percentage of welding points being relatively small with respect to the total number of intersection points.

[0013] The selvages, denoted 5 in Fig. 1, defined by the weft threads 3 being woven back in the opposite direction, can be used to delimit all or some of the edges of the manufactured article used to make a finished article.

[0014] Fig. 2 shows a woven manufactured article M1 produced in the form of a strip and delimited by two selvages 5.

[0015] When an object such as a collar, a chestpiece or other item such as the one shown in Fig. 3 is to be produced, a cut T1 and a cut T2 have to be made in order to delimit the internal profile and the external profile respectively of the manufactured article. In order to secure the fabric along the cut edges such as the ones T1 and/or T2, a fastening C has to be made at the points at which the warp and weft threads intersect along the cutting line or along each cutting line such as the ones T2 and T1; these fastenings can be made by means of small welds using the same material as that used to make the warp and/or weft threads, or using adhesives which can be transparent so that they are virtually invisible or using some other means.

[0016] All or some of the cut edges can be secured by attaching fastening elements, such as for example those indicated by the reference 7 in Fig. 2, to the ends of the manufactured article M1 produced in the form of a strip and constituting the piece of jewelry in Fig. 2, such as a bracelet or other item; these accessories 7 can be made such that they trap the ends of the warp threads and also form a functional element, for example the components 7A or 7B which form a fastening for the ring or bracelet. Along the same lines, a clasp made up of two components F1 and F2 can be attached to a necklace like the one shown in Fig. 3, at the separate ends E1 and E2 of the necklace that are to be fastened together once the necklace has been placed around the neck of the wearer. The edges T1 and/or T2 can also be provided with components for fastening the weft and warp threads together and which also have an esthetic function such as the one provided by accessory components A1 and A2 illustrated in Fig. 3.

[0017] The fabric can have a plain weave with uniform interlacing between the weft and warp threads, or it can have a patterned weave created by manipulating the warp and/or weft threads in groups rather than 1:1.

[0018] Decorative or functional parts, such as the ones denoted D by way of example in Fig. 3, can be applied to the manufactured article or the item formed from this manufactured article - including to intermediate areas of the woven fabric - using any suitable application techniques and including those which would, if necessary, allow these parts to be removed and re-applied at different points on the manufactured article such as a piece of jewelry.

[0019] When the woven fabric according to the invention is to be joined to other portions of a manufactured article, for example made of a conventional fabric, suitable stitching systems could be adopted in order to join the conventional fabric to the woven fabric formed according to the invention using chains. This join could also be sufficient to secure the warp 1 and weft 3 threads in order to prevent this manufactured article from fraying; a temporary join could be made during handling operations, this join being subsequently undone once the permanent join to the surrounding conventional fabric is made, for example in order to create a garment or similar item of clothing.

[0020] The chains can be of any known type consisting of connecting links. Chains of the type known as "bead" chains can also be used, the structure of which is shown in Fig. 5; in this case the fabric takes the form illustrated in Fig. 4.

[0021] Needless to say, the drawing shows only one example given solely by way of practical demonstration of the invention, and the latter may vary in terms of its forms and arrangements without thereby departing from the scope of the concept on which said invention is based.

Claims

1. A manufactured article for garments, clothing accessories, pieces of jewelry, bags and other items, characterized in that it consists of a woven fabric made up of warp and weft threads which consist, at least in part, of flexible chains made of metal or other materials instead of yarns.

2. Manufactured article according to claim 1, characterized in that the fabric is formed in a plain weave or in a patterned weave programmed in a known manner using a heddle system, Jacquard system or similar method.

3. Manufactured article according to claim 1 or 2, characterized in that the edge of the article is at least partly delimited by the selvage.

4. Manufactured article according to claim 1 or 2 or 3, characterized in that the cut edge of the article is secured by means of welding, adhesive bonding and other fastening means designed to prevent the fabric from fraying.

5. Manufactured article according to claim 1 or 2 or 3 or 4, characterized in that the cut edge of the article is secured using elements which constitute decorative or functional accessories, such as clasps and

fastenings.

6. Manufactured article according to at least one of claims 1 to 5, characterized in that the surfaces of the chains are diamond-cut.

7. Manufactured article according to at least one of claims 1 to 5, characterized in that the surfaces of the chains are hammered or frosted.

8. Manufactured article according to at least one of the preceding claims, characterized in that its overall density is uniform or varies as a result of the pattern, the properties of the threadlike elements used and the distance between the threadlike elements used.

9. Manufactured article for garments, clothing accessories, pieces of jewelry, bags and other items, consisting of a woven fabric in which chains take the place of yarns; all as described and illustrated.

10. Finished articles that use the manufactured article referred to in at least one of the preceding claims.

Fig.1

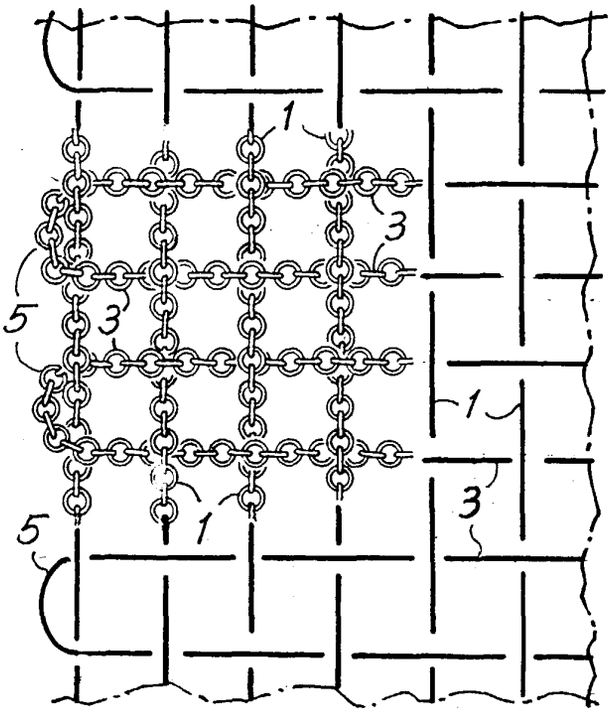

Fig.2

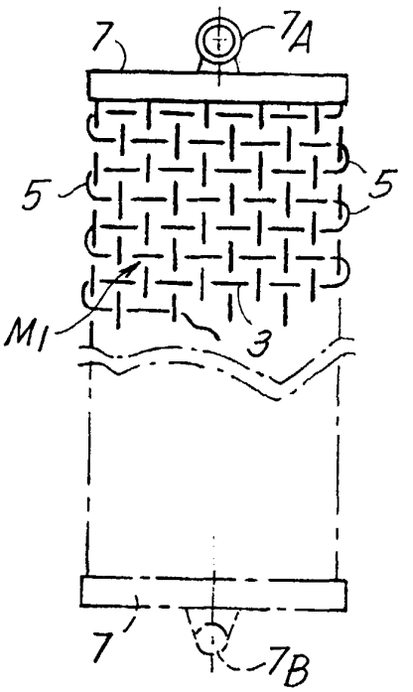

Fig.3

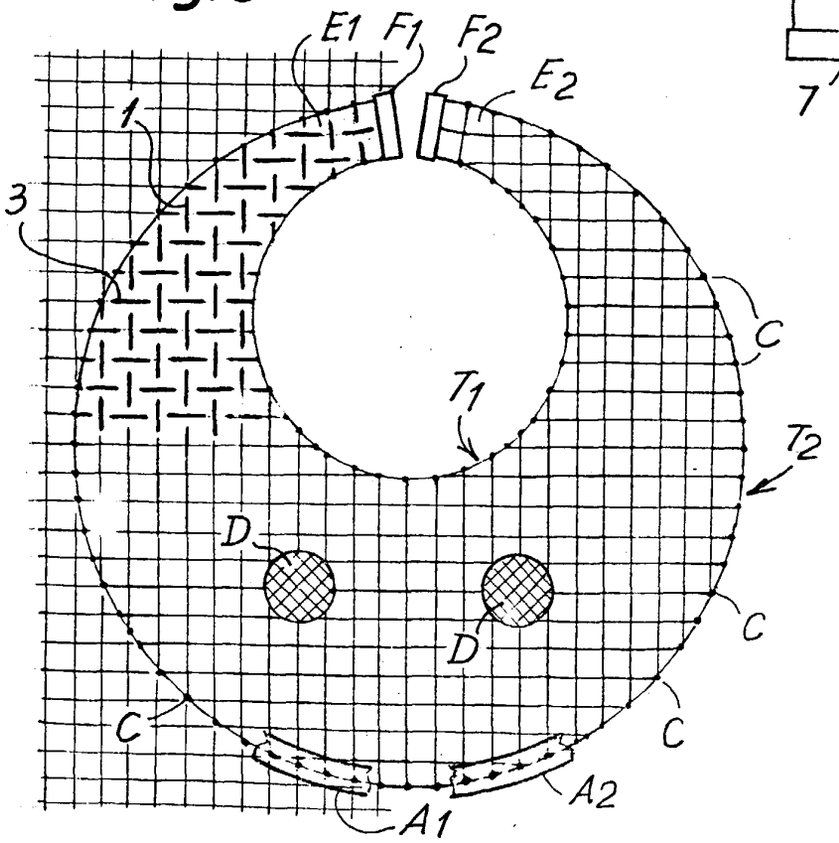

Fig. 4

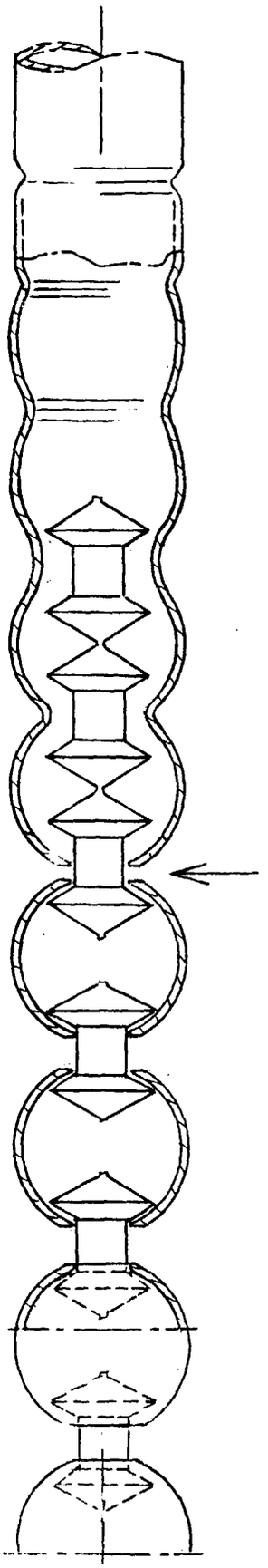

Fig. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 99 83 0585

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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A	US 4 673 015 A (ANDREASSON OLOF I) 16 June 1987 (1987-06-16) * figures 1-6 *		
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A	EP 0 331 377 A (SUTCLIFFE GROUP LTD) 6 September 1989 (1989-09-06) * figure 2 *		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7) D03D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	13 July 2000	Rebiere, J-L

CATEGORY OF CITED DOCUMENTS

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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
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