



Label, method for the production of labels and an
apparatus for carrying out the method

5 The invention [lacuna] a label according to the
preamble of claim 1, a method for the production of
labels and an apparatus for carrying out the method.

As is known, the labels are woven in the form of bands
10 in a broad fabric composed of fusible yarns, a repeat
being provided for each band. The broad fabric consists
of a backing fabric consisting of warp threads, of a
ground weft and of embroidery wefts which are led over
the entire web breadth and which form a figure of the
15 label. The bands are subsequently cut out from the
textile web in the form of strips running in the warp
direction, the backing fabric and the embroidery wefts
being severed. If a thermal cutting device is used for
this purpose, the fusion of the backing fabric and of
20 the figure threads gives rise to the known hard and
rough fusion edges which are very thick and unpleasant.

Figures 1 and 2 show a known version of a label. The
label has, as is customary, a quadrangular shape with
25 longitudinal sides 1 and narrow sides 2. The label
consists of the backing fabric 3 and embroidery wefts
which, in one region of the label, produce a figure
such that there is in each case [lacuna] edge of
backing fabric on the narrow side. The label is woven
30 in such a way that the warp threads 4 run parallel and
the weft threads 5 transversely to the longitudinal
sides 1 of the label. The longitudinal sides of the
label are cut by a thermal cutting device. The backing
fabric and the embroidery wefts are thereby fused
35 together, so that the disturbing fusion edge 6 is
formed. The label according to figure 1 is folded on
the narrow sides (only one fold is illustrated), so
that the fusion edge 6 is free. The label according



Figure 2 is folded on the longitudinal sides in order to cover the fusion edge 6. This label may also be provided with end folds 7. The label is fastened on the narrow sides, so that the longitudinal sides 1 come into contact with the skin and the article of clothing. This side should have as soft an edge as possible, so that the article of clothing feels pleasant to wear and in order to avoid damage to the article of clothing and places on the human body where friction occurs. In order to achieve this, it is proposed, in EP-A-0 389 793, to provide the fold on the label on the free longitudinal sides having the fusion edge and on the narrow side.

It is considered a disadvantage that the warp threads of the backing fabric run in the longitudinal direction of the label and the number of these is fixed, so that labels can be produced in a specific quality, and that, for folding, the label has to be woven as a semi-finished product with larger dimensions. The folding of the longitudinal side having the fusion edge formed by the fused ground wefts and embroidery wefts leads to very thick and uncomfortable margins on the labels. If, in addition, an end fold is provided, the label consists of four layers in this region, and this is unacceptable for the user and the wearer.

If, as described in EP-A-0 546 485, the textile web is severed by means of a mechanical cutting device and a number of longitudinal threads are removed at the separation point by mechanical means, a fringed edge is formed on the longitudinal side of the label.

It is considered a disadvantage that a margin consisting of backing fabric must likewise be provided in order to form the fringed edge, so that, for folding, the label has to be woven as a semi-finished product with larger dimensions and a special outlay is



necessary in order to form the fringed edge. Moreover, further longitudinal threads may come loose at the fringed edge, so that the label becomes useless or unsightly.

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The known methods for the production of labels have the disadvantages that the folding of the longitudinal side necessitates a higher outlay in terms of adhesive bonding, and that, because of the dimensions of the semi-finished product, the weaving breadth of a weaving machine is utilized to only a restricted extent or there is a relatively large amount of waste.

The invention is intended to remedy this. The object on which the invention is based is to improve a label.

This object is achieved, according to the invention, by means of the defining features of claim 1.

The advantages which can be achieved by means of the invention are to be seen essentially in that the cut edge on the first non-folded side of the label is soft and skin-friendly and wearing comfort is improved appreciably because the cut edge produced by the ground wefts has virtually no brows. The cut edges can be covered by the second sides being folded, with the result that the label is further improved. Since the weft threads run parallel to the longitudinal side of the label, a uniform appearance is achieved over the entire length of the label, because the weft threads cover the rear side uniformly.

A method for the production of labels is characterized, according to the invention, by the defining features of claim 7.

The advantages which can be achieved by means of the method according to the invention are to be seen in



that labels of different length and breadth are woven on the same type of weaving machine. Labels with a weave repeat can be woven up to a weaving breadth of about 115 cm, so that only a small amount of waste occurs. The weft density in the backing fabric can be selected so that labels with simulated weaves, such as taffeta, half-satin and satin, are produced on the same weaving machine. In the marginal region of the strips, the embroidery threads can be removed, so that the end fold becomes very thin.

An apparatus for carrying out the method is characterized by the features of claim 17.

The invention is explained below with reference to the accompanying drawings in which:

figure 1 shows a three-dimensional illustration of a version of a known label;

figure 2 shows a modified version of the label according to figure 1;

figure 3 shows a three-dimensional illustration of a version of a label according to the invention;

figure 4 shows a three-dimensional illustration of a modified version of the label according to the invention shown in figure 3;

figure 5 shows a three-dimensional illustration of another version of the label according to the invention;

figure 6 shows a section along the line VI-VI in figure 5 on a larger scale;

figure 7 shows a section along the line VII-VII in figure 5;

5 figure 8 shows a section along the line VIII-VIII in figure 5;

figure 9 shows a side view of the label according to figure 5 with and without a folded narrow side;

10 figure 10 shows a side view of a modified version of the label according to figure 5 with and without a folded narrow side;

15 figure 11 shows a diagrammatic illustration of a method for the production of the label, and

figure 12 shows an application of the label according to the invention.

20 Figure 3 shows a label according to the invention, from the illustration of which the difference from the known label according to figures 1 and 2 as regards the warp direction and weft direction can be seen clearly and
25 which is explained by the following description with reference to figures 4 to 8.

The label has, as is customary, a quadrangular shape with two non-folded longitudinal sides 1 and two
30 foldable narrow sides 2. The label consists of a backing fabric 11 and of a plurality of embroidery wefts 12 which, in a region 13 of the label, produce a figure such that a margin 14 of backing fabric is present on the longitudinal sides, and which are tied
35 in a floating manner on the rear side of the label. The label is woven in such a way that the warp threads 4 run transversely to and the weft threads 5 parallel to the longitudinal side 1 of the label. The narrow sides

2 of the label which are cut by a thermal cutting device have a cut edge at which the backing fabric 11 and the embroidery wefts 12 floating on the rear side of the label are fused, a fusion edge 15 being formed.

5 The label may be folded on the narrow sides in order to cover the fusion edge. The longitudinal sides of the label which are cut by a cutting device run through the backing fabric 11 and have a cut edge 16 which, as already mentioned, is advantageously soft and skin-

10 friendly.

Reference is made to figures 9 and 10. As figure 9 shows, the label consists of a backing fabric 11 and of a plurality of embroidery wefts 12 which, in the region

15 13 of the label, produce a figure and are tied in a floating manner on the rear side of the label, the label being folded on the narrow sides. Figure 10 shows a label, in which the floating embroidery wefts 12 are removed on the rear side in the region of the narrow

20 side, so that, in each case, a portion 18 of the backing fabric 11 is free. These portions 18 are folded, so that a very thin label is achieved.

The method for producing the label is described below.

25 As shown in figure 11, to produce the labels, in a first step a broad fabric 21 of fusible thread material is produced, which has a number of labels 22 lying next to one another and which is woven continuously according to a repeat extending over the weaving

30 breadth. The broad fabric 21 is woven by the woven-fabric technique with warp threads 4 and ground wefts 5 for a backing fabric 11 and also with a plurality of embroidery wefts 12 (figure 8) for the figure, the embroidery wefts being woven in a region 13 of each

35 label. In a second step, the broad fabric 21 is separated into a set of strips 25 which contain transversely lying labels 22 succeeding one another in the longitudinal direction of the strips. For

separation, a thermal cutting device 26 is provided, which either is arranged on the weaving machine or is a separate device. If the broad fabric 21 is divided into strips 25, the strips 25 are wound up for further processing. If the broad fabric 21 is not divided into strips, the broad fabric is wound onto a cloth beam (not illustrated). The strips 25 are a semi-finished product for the labels. In a third step, the strips 25 are folded on the narrow sides [lacuna] a folding device, the length of the label being determined and the narrow side of the label being formed. Simultaneously with folding, the folded portion is fixed, known methods being used. The folded strips are separated by means of mechanical, thermal or ultrasonic devices 27, at the same time the width of the label being determined and the cut edge running through the backing fabric.

Figure 12 shows the application of the label. The label is stitched with the folded narrow sides to an article of clothing, so that the fusion edge lies underneath the label and the longitudinal side having the soft edge is free.

Patent Claims

1. A label with two first non-folded sides (1) and two second foldable sides (2) running transversely to these, by the woven-fabric technique, with at least two warp threads (4) and with a ground weft thread (5) for the backing fabric (11) and also with a plurality of embroidery weft threads (12) for the figure, consisting of fusible thread material, characterized in that the embroidery wefts (12) forming a figure run parallel to and at a distance from the first non-folded sides (1) of the backing fabric (11), and in that the non-folded side (1) is formed by cutting, outside the region (13) of the figure, in the backing fabric.
2. The label as claimed in claim 1, characterized in that the second side has a cut edge (15) which runs transversely to the embroidery wefts, and in that the second sides (2) are folded or non-folded.
3. The label as claimed in claim 2, characterized in that the embroidery wefts (12) have the same or a different color or consist of the same or a different type of yarn.
4. The label as claimed in claim 1, characterized by two non-folded longitudinal sides (1) and two foldable narrow sides (2).
5. The label as claimed in one of the preceding claims, characterized by a predetermined weft density in the backing fabric (11).
6. The label as claimed in claim 3, characterized in that the label is provided with a center fold or middle fold.

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7. A method for the production of labels as claimed in claim 1 in a broad fabric (21) produced with fusible thread material, by the woven-fabric technique with at least two warp threads (4) and with a ground weft (5) for the backing fabric (11) and also with a plurality of embroidery wefts (12) for the figure, the broad fabric being separated, after weaving, by means of cutting into a set of strips (25) lying next to one another, characterized in that the broad fabric (21) is woven in such a way that a plurality of labels (22) lie next to one another with their first non-folded side (1) in the weft direction and with their second foldable side (2) in the warp direction, and in that the broad fabric (21) is cut along the second side in order to produce strips (25) with transversely lying labels (22) succeeding one another in the direction of run of the broad fabric (21).
8. The method as claimed in claim 7, characterized in that the broad fabric (21) is woven according to at least one weave repeat.
9. The method as claimed in claim 7, characterized in that embroidery wefts (12) of the same or a different color or type of yarn are inserted.
10. The method as claimed in claim 7, characterized in that the warp density is predetermined and the weft density of the backing fabric (21) of the labels is freely adjustable.
11. The method as claimed in claim 7, characterized in that the embroidery wefts are removed in the marginal region (18) of the strips.





12. The method as claimed in claim 11, characterized in that the embroidery wefts are removed in the marginal region by means of thermal or mechanical devices.
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13. The method as claimed in claim 7, characterized in that, after cutting, the strips (25) are folded in the marginal region (18), in order to produce labels (22) with a predetermined length.
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14. The method as claimed in claim 7, characterized in that the labels (22) are singled out along their first side (1) by the cutting of the backing fabric (11), in order to produce labels with a
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- predetermined breadth.
15. The method as claimed in claim 14, characterized in that the labels (22) are singled out by cutting by means of thermal, mechanical or ultrasonic
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- devices.
16. The method as claimed in one of the preceding claims, characterized in that the cutting of the strips (25) is carried out by use of thermal,
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- mechanical or ultrasonic devices.
17. An apparatus for carrying out the method as claimed in one of claims 7 to 16, characterized by a weaving machine with a jacquard apparatus for
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- individual heddle control, by a cutting device and by a folding device.