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FOLDING HAT

Field of the Invention

5 The invention relates to a folding hat, and more particularly, but not exclusively, to a hat folded from a sheet of paper.

Background of the Invention

10 It is known to provide hats constructed from paper sheeting. For example, US Patent No. 4,429,420 discloses a cowboy hat formed from a single sheet of paper-board which is cut and scored. However, the applicant has determined that it would be beneficial to provide a folding hat with an improved construction method which allows easy assembly and disassembly, and/or providing improved shaping to the hat. In addition, the
15 applicant has determined that the folding hat may maximise space for branding/promotion, and/or may have a uniquely cultural flavour (eg, Australian, American, Mexican etc.), such that it can be used for promotions at cultural events such as, for example, sporting events which have a cultural significance within any given country/region.

20 Examples of the present invention seek to provide a folding hat formed from sheet material which overcomes or at least alleviates one or more disadvantages associated with previous paper hats.

Summary of the Invention

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 In accordance with one aspect of the present invention, there is provided a folding hat formed from sheet material, including a crown and a brim, wherein the brim is attached to the crown, an upper surface of the crown is indented, and a bottom rim portion of the crown imparts shaping to the brim.

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Preferably, the bottom rim portion of the crown supports the brim in a generally continuous curve whereby an upper surface of the brim is curved from one edge of the brim to an opposite edge of the brim.

5 Preferably, the upper surface of the brim is convexly curved from one edge of the brim to an opposite edge of the brim. More preferably, the upper surface of the brim is convexly curved from a front edge of the brim to a rear edge of the brim.

Preferably, the hat is held together entirely by folding said sheet material.

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Preferably, the brim is attached to the crown by a plurality of tabs formed in one of the brim or crown, said tabs interlocking with slots formed in the other of the brim or crown. More preferably, the crown is folded at the bottom rim portion, with said slots formed at or near said fold, and wherein said tabs are formed at an inside edge of the brim.

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In one form, the sheet material is printed on only one side, and the hat is arranged such that all surfaces of the hat visible from above the head of a wearer are printed.

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In a preferred example, the hat has a detachable coupon, the coupon being adapted such that it can be removed from the hat without affecting the appearance of the hat when worn.

It is preferred that the sheet material is paper.

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In accordance with another aspect of the present invention, there is provided a folding hat formed from sheet material, including a crown and a brim, wherein the brim is attached to the crown, and the hat is adapted to be folded between a flat condition and an erect condition.

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Preferably, the brim is attached to the crown in both the flat condition and the erect condition.

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Preferably, in the flat condition, the hat is fully flat to accommodate flat stacking of a plurality of like folding hats.

5 In a preferred form, the brim has transverse folds across the brim, the transverse folds being folded in the flat condition so as to layer portions of the brim, and the transverse folds being unfolded in the erect condition. More preferably, when in the flat condition the transverse folds are folded such that a section of an upper surface of the brim is folded onto itself. Even more preferably, the transverse folds diverge toward an outer
10 edge of the brim.

Preferably, the crown has an upper portion which, when in the erect condition, is indented to form a concave top surface providing lateral structure to the crown, and, when in the flat condition, is folded along a central fold running centrally of the upper portion.

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Preferably, when in the erect condition, the brim is curled across the transverse folds to maintain the transverse folds in an unfolded state.

In accordance with another aspect of the present invention, there is provided a
20 method of forming a hat, including the steps of:

- forming a brim from a first sheet portion;
- forming a crown from a second sheet portion;
- attaching the brim to the crown; and
- indenting an upper surface of the crown,

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wherein the hat is configured such that a bottom rim portion of the crown supports the brim in a curve whereby an upper surface of the brim is convexly curved..

Preferably, the bottom rim portion of the crown supports the brim in a curve
30 whereby an upper surface of the brim is convexly curved from one edge of the brim to an opposite edge of the brim.

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In accordance with another aspect of the present invention, there is provided a folding hat formed from sheet material, wherein the hat has a detachable coupon, the coupon being adapted such that it can be removed from the hat without affecting the appearance of the hat when worn.

In accordance with another aspect of the present invention, there is provided a method of assembling a hat from a sheet to a flat deconstructed hat, the hat being a hat as described above, the method including the steps of:

- 10 forming the brim from a first sheet portion;
- forming the crown from a second sheet portion; and
- attaching the brim to the crown;
- wherein transverse folds of the brim are folded such that a surface of the brim is folded onto itself to layer portions of the brim.

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In accordance with another aspect of the present invention, there is provided a method of erecting a hat from a flat condition to an erect condition, the hat being a hat as described above, the method including the steps of:

- indenting an upper surface of the crown;
- 20 unfolding transverse folds of the brim; and
- curling the brim across the transverse folds to maintain the transverse folds in an unfolded state.

Brief Description of the Drawings

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The invention is described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Figure 1 shows an upper/side perspective view of a folding hat in accordance with an example of the present invention;

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Figure 2 shows a blank for forming the hat of Figure 1;

Figure 3 shows a top view of a brim of the hat of Figure 1;

5 Figure 4 shows a top view of the crown of the hat of Figure 1, shown in an unfolded condition;

Figure 5 shows the crown in a partially folded condition;

10 Figure 6 shows the crown in a further partially folded condition;

Figure 7 shows the crown in yet a further partially folded condition;

Figure 8 shows the brim being attached to the partially folded crown;

15 Figure 9 shows the completed hat;

Figures 10a and 10b show a folding hat in accordance with an example of the present invention which includes a detachable coupon;

20 Figure 11 shows a side view of a folding hat in accordance with another example of the present invention, the hat being depicted in a flat condition;

25 Figure 12 shows an underside of the hat of Figure 11, the hat being depicted in the flat condition;

Figure 13 is a side view of the folding hat of Figures 11 and 12, shown in an intermediate condition;

30 Figure 14 is a perspective view of the folding hat of Figures 11 to 13, the hat shown in a further intermediate condition;

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Figure 15 is a perspective view of the folding hat of Figures 11 to 14, the hat shown in an erect condition; and

5 Figure 16 is an underside view of the folding hat of Figures 11 to 15, the hat shown in the erect condition.

Detailed Description

10 With reference to Figure 1 of the drawings, there is shown a folding hat 10 formed from paper sheet material, including a crown 12 and a brim 14. The brim 14 is attached to the crown 12, and a bottom rim portion 16 of the crown 12 imparts shaping to the brim 14. More specifically, an upper surface 18 of the crown 12 is indented, and the bottom rim portion 16 of the crown 12 supports the brim 14 in a generally continuous curve 20
15 whereby an upper surface 22 of the brim 14 is curved from one edge of the brim 14 to an opposite edge of the brim 14.

Advantageously, in the example shown in Figure 1 of the drawings, the upper surface 22 of the brim 14 is convexly curved from a front edge 24 of the rim 14 to the rear
20 edge 26 of the brim 14. By virtue of the indentation in the upper surface 18 of the crown 12 and the convex curve of the upper surface 22 of the brim 14, the folding hat 10 is given the shaping of an Australian stockman hat. The applicant has identified that it would be beneficial for a hat with shaping shown in the drawings to be provided, as it would appeal to people attending events having an Australian flavour, particularly with appeal to
25 overseas visitors to large Australian sporting events.

Although the example shown is in the form of an Australian stockman hat, it will be appreciated that alternative examples of the invention may take other forms, such as hats typical of other countries/regions, including but not limited to the following hat styles:
30 Sombrero, Panama, Fedora, Havana, Cowboy and Slouch hat.

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Figures 2A and 2B show a blank for forming the folding hat 10. More specifically, on the left-hand side of the drawing in Figure 2A is shown a blank for forming the crown 12, and on the right-hand side of the drawing in Figure 2B is shown a blank for forming the brim 14. Although the brim 14 is initially in a flat configuration, shaping is imparted to the brim 14 by the crown 12 during assembly of the folding hat 10 such that the upper surface 22 of the brim 14 has a generally continuous convex curvature from the front edge 24 of the brim 14 to the rear edge 26 of the brim 14.

Advantageously, the hat 10 is held together entirely by folding the sheet material, as is demonstrated by the assembly of the folding hat 10 as shown progressively in Figures 3 to 9. By virtue of folding hat 10 being held together entirely by folding, adhesive and/or stitching is not required, and the folding hat 10 is therefore able to be assembled and disassembled easily and inexpensively, without the need for purchasing adhesive or tools required for stitching.

The brim 14 is attached to the crown 12 by a plurality of tabs 28 formed in one of the brim 14 or the crown 12, the tabs 28 interlocking with slots 30 formed in the other of the brim 14 or crown 12. In the particular example depicted in the drawings, the crown 12 is folded at the bottom rim portion 16, with the slots 30 formed at or near the fold 32, the tabs 28 being formed at an inside edge 34 of the brim 14.

Owing to the configuration of the folding hat 10, the sheet material is able to be printed on only one side, as the hat 10 is arranged such that all surfaces of the hat 10 visible from above the head of a wearer are printed, even when only one side of the sheet material is printed. This may be advantageous where it is cost effective to print only one side of the sheet material, and where it is not desirable to have the printed side of the material in contact with the head of the wearer. In alternative examples, branding and/or graphics may be printed on both sides of the sheet of material. In other examples, the material may be printed on both sides, as may be beneficial for particular hat styles where both sides of the material are visible, including the slouch hat where one side of the brim is

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pinned up to the crown, and certain styles of cowboy hat where both sides of the brim are raised (and possible also pinned up to the crown).

Figures 2A and 2B show locations at which the hat may be provided with a detachable coupon 36, and preferably with a plurality of detachable coupons 36. The coupons 36 are located such that they can be removed from the hat 10 without affecting the appearance of the hat 10 when worn. Advantageously, this is achieved by locating the coupons 36 where the crown 12, when folded, has a thickness of more than one layer of material so that the coupon 36 can be removed for redemption by the wearer without affecting the external appearance of the hat. Also, as the coupon 36 is removed from a portion adjacent the head of the wearer, the underside appearance of the hat 10 is also not affected when the hat 10 is worn. The hat 10 may be formed of paper material having 200 grams per square metre, however other grades of paper and other sheet materials may also be used.

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With reference to the assembly of the folding hat 10 as shown in Figures 3 to 9 of the drawings, the crown 12 is folded in half along its central axis 38 so as to form the partially folded crown 12 as shown in Figure 5. Subsequently, the crown 12 is folded along the lines 40, in opposite directions, to arrive at the configuration shown in Figure 6. The lower edge is folded inwardly along line 42. At this stage, the tabs 28 are able to be inserted through the slots 30, as shown in Figure 8, and a band 44 is formed by folding upwardly at line 46 and downwardly at line 32. Advantageously, the tabs 28 are locked in place as they are folded downwardly along the inside of the band 44, and the band 44 also serves to retain the folded triangles of the crown 12.

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Once the tabs 28 are inserted into the slots 30 on both sides of the crown 12, the crown is opened laterally to form the cavity for receiving the head of the wearer, and the upper surface 18 of the crown 12 is indented by pressing downwardly so as to support the opened crown 12. By virtue of the act of opening the crown 12, the bottom rim portion 16 at either side becomes curved, thereby imparting the convex shaping to the brim 14. The formed hat 10 is shown in Figure 9.

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Figures 10a and 10b show an example of the invention wherein the coupon 36 is formed in an inside wall of the crown 12, with dotted or perforated lines 50 along which the coupon 36 can be torn out from the folded hat 10.

5 Figures 11 to 16 show a hat 10 in accordance with an alternative example of the present invention. The hat 10 shown in Figures 11 to 16 is generally similar to the one shown in Figures 1 to 10b, and like features are indicated with like reference numerals. The main difference of the hat 10 shown in Figures 11 to 16 when compared to the hat 10 shown in Figures 1 to 10b, is that the hat 10 shown in Figures 11 to 16 is adapted to be
10 moved between a flat condition and an erect condition, with the brim 14 attached to the crown 12 in both conditions. More specifically, Figures 11 to 16 show a folding hat 10 formed from sheet material, including a crown 12 and a brim 14. The brim 14 is attached to the crown 12, and the hat 10 is adapted to be folded between a flat condition (see Figures 11 and 12) and an erect condition (see Figures 15 and 16), via an intermediate
15 condition (see Figures 13 and 14).

The brim 14 is attached to the crown 12 in both the flat condition and the erect condition. In the flat condition, the hat 10 is fully flat to accommodate flat stacking of a plurality of like folding hats. This is advantageous as it enables a plurality of the hats to be
20 flat packed within a relatively small space, which is beneficial for storage and transportation.

The brim 14 has transverse folds 52 across the brim 14, the transverse folds 52 being folded in the flat condition so as to layer portions 54 of the brim 14, and the
25 transverse folds 52 being unfolded in the erect condition. When in the flat condition, the transverse folds 52 are folded such that a section of an upper surface 22 of the brim 14 is folded onto itself. The transverse folds 52 are generally radial/outward of the hat 10, at least when the hat 10 is in the erect condition, and diverge toward an outside edge of the brim 14. Pairs of the transverse folds 52 may intersect at the inside edge of the brim 14.

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The crown 12 has an upper portion which, when in the erect condition, is indented to form a concave top surface 18 providing lateral structure to the crown 12, and, when in the flat condition, the surface 18 is folded along a central fold 54 running centrally of the upper portion.

When in the erect condition, the brim 14 is curled across the transverse folds 52 to maintain the transverse folds 52 in an unfolded state. This curling may be assisted by the provision of a plurality of parallel scores 56 which can be provided in a direction which crosses the transverse folds 52.

The hat 10 shown in Figures 11 to 16 is able to be assembled from a single sheet of paper into a flat packed condition, in which condition it is delivered to the location at which it is provided to the end user. The hat 10 is easily erectable from the flat condition to the erect condition, and the erecting of the hat 10 may be done by either the distributors of the hats or by the end users themselves. The method of forming a sheet of paper into a flat deconstructed hat 10 includes the following steps: forming the brim 14 from a first sheet portion; forming the crown 12 from a second sheet portion; and attaching the brim 14 to the crown 12. The transverse folds 52 of the brim 14 are folded such that a surface of the brim 14 (ie. the upper surface or the lower surface of the brim) is folded onto itself to layer portions of the brim 14. This method results in the hat 10 in the flat condition, as shown in Figures 11 and 12.

The hat 10 is able to be readily moved between the flat condition (shown in Figures 11 and 12) and the erect condition (shown in Figures 15 and 16), via the intermediate condition shown in Figures 13 and 14. More specifically, the method of erecting the hat 10 from the flat condition to the erect condition, includes the steps of: indenting the upper surface of the crown 12 (as is done in bringing the hat 10 between the configurations shown in Figures 11 and 13); unfolding the transverse folds 52 of the brim 14 (as is done in bringing the hat 10 between the configurations shown in Figures 13 and 14); and curling the brim 14 across the transverse folds 52 (as is done in bringing the hat 10 between the

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configurations shown in Figures 14 and 15) to maintain the transverse folds 52 in an unfolded state.

Figure 15 also shows an instruction card 58 which may be fitted to the band 44 of the crown 14, and may be inserted through a slot also used for attaching the brim 14 to the crown 12. The instruction card 58 may show instructions to instruct the end user on how to erect the hat 10 from the flat condition to the erect condition. The instructions may be summarised as "Open" (the crown 14), "Push" (the top of the crown 12 to indent it), "Roll" the brim 14 to curl the sides) and "Tear" (the instruction card 58 from the hat 10).

Figure 16 shows the underside of the hat 10 in the erect condition and, in particular, the nature and location of the detachable coupons 36 which are able to be removed from the hat 10 without affecting the appearance of the hat 10 when worn.

While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not by way of limitation. It will be apparent to a person skilled in the relevant art that various changes in form and detail can be made therein without departing from the spirit and scope of the invention. Thus, the present invention should not be limited by any of the above described exemplary embodiments.

The reference in this specification to any prior publication (or information derived from it), or to any matter which is known, is not, and should not be taken as an acknowledgment or admission or any form of suggestion that that prior publication (or information derived from it) or known matter forms part of the common general knowledge in the field of endeavour to which this specification relates.

Throughout this specification and the claims which follow, unless the context requires otherwise, the word "comprise", and variations such as "comprises" and "comprising", will be understood to imply the inclusion of a stated integer or step or group

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of integers or steps but not the exclusion of any other integer or step or group of integers or steps.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A folding hat formed from sheet material, including a crown and a brim, wherein the brim is attached to the crown, and a bottom rim portion of the crown imparts shaping to the brim.
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2. A folding hat as claimed in claim 1, wherein an upper surface of the crown is indented.
- 10 3. A folding hat as claimed in claim 1 or claim 2, wherein the bottom rim portion of the crown supports the brim in a generally continuous curve whereby an upper surface of the brim is curved from one edge of the brim to an opposite edge of the brim.
- 15 4. A folding hat as claimed in claim 3, wherein the upper surface of the brim is convexly curved from one edge of the brim to an opposite edge of the brim.
5. A folding hat as claimed in claim 4, wherein the upper surface of the brim is convexly curved from a front edge of the brim to a rear edge of the brim.
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6. A folding hat as claimed in any one of claims 1 to 5, wherein the hat is held together entirely by folding said sheet material.
7. A folding hat as claimed in any one of claims 1 to 6, wherein the brim is attached to the crown by a plurality of tabs formed in one of the brim or crown, said tabs interlocking with slots formed in the other of the brim or crown.
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8. A folding hat as claimed in claim 7, wherein the crown is folded at the bottom rim portion, with said slots formed at or near said fold, and wherein said tabs are formed at an inside edge of the brim.
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9. A folding hat as claimed in any one of claims 1 to 8, wherein the sheet material is printed on only one side, and the hat is arranged such that all surfaces of the hat visible from above the head of a wearer are printed.

5 10. A folding hat as claimed in any one of claims 1 to 9, wherein the hat has a detachable coupon, the coupon being adapted such that it can be removed from the hat without affecting the appearance of the hat when worn.

10 11. A folding hat as claimed in any one of claims 1 to 10, wherein the sheet material is paper.

12.. A folding hat formed from sheet material, including a crown and a brim, wherein the brim is attached to the crown, and the hat is adapted to be folded between a flat condition and an erect condition.

15 13. A folding hat as claimed in claim 12, wherein the brim is attached to the crown in both the flat condition and the erect condition.

20 14. A folding hat as claimed in claim 12 or 13, wherein in the flat condition the hat is fully flat to accommodate flat stacking of a plurality of like folding hats.

25 15. A folding hat as claimed in any one of claims 12 to 14, wherein the brim has transverse folds across the brim, the transverse folds being folded in the flat condition so as to layer portions of the brim, and the transverse folds being unfolded in the erect condition.

30 16. A folding hat as claimed in claim 15, wherein when in the flat condition the transverse folds are folded such that a section of an upper surface of the brim is folded onto itself.

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17. A folding hat as claimed in claim 16, wherein the transverse folds diverge toward an outer edge of the brim.
18. A folding hat as claimed in any one of claims 12 to 17, wherein the crown has an upper portion which, when in the erect condition, is indented to form a concave top surface providing lateral structure to the crown, and, when in the flat condition, is folded along a central fold running centrally of the upper portion.
19. A folding hat as claimed in any one of claims 15 to 17, wherein, when in the erect condition, the brim is curled across the transverse folds to maintain the transverse folds in an unfolded state.
20. A method of forming a hat, including the steps of:
forming a brim from a first sheet portion;
forming a crown from a second sheet portion;
attaching the brim to the crown; and
indenting an upper surface of the crown,
wherein the hat is configured such that a bottom rim portion of the crown supports the brim in a curve whereby an upper surface of the brim is convexly curved.
21. A method of forming a hat as claimed in claim 20, wherein the bottom rim portion of the crown supports the brim in a curve whereby an upper surface of the brim is convexly curved from one edge of the brim to an opposite edge of the brim.
22. A folding hat formed from sheet material, wherein the hat has a detachable coupon, the coupon being adapted such that it can be removed from the hat without affecting the appearance of the hat when worn.
23. A method of assembling a hat from a sheet to a flat deconstructed hat, the hat being a hat as claimed in any one of claims 12 to 19, the method including the steps of:

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forming the brim from a first sheet portion;

forming the crown from a second sheet portion; and

attaching the brim to the crown;

5 wherein transverse folds of the brim are folded such that a surface of the
brim is folded onto itself to layer portions of the brim.

24. A method of erecting a hat from a flat condition to an erect condition, the hat being
a hat as claimed in any one of claims 12 to 19, the method including the steps of:

10 indenting an upper surface of the crown;

unfolding transverse folds of the brim; and

10 curling the brim across the transverse folds to maintain the transverse folds
in an unfolded state.

25. A folding hat substantially as hereinbefore described with reference to the
15 accompanying drawings.

26. A method of forming a hat substantially as hereinbefore described with reference to
the accompanying drawings.