

MIXING TOOL FOR HAIR COSMETICS, HAIR COSMETIC KIT
AND HAIR COSMETIC PREPARATION METHOD

CROSS REFERENCE TO RELATED APPLICATIONS

5 [0001]

The present application claims the priority based on a Japanese Patent Applications No. 2010-257653 filed on November 18, 2010, and No. 2010-257658 filed on November 18, 2010, the disclosures of which are hereby incorporated by reference in its entirety.

10

BACKGROUND

Technical Field

[0002]

The present invention relates to a mixing tool for hair cosmetics, and
15 more specifically to a tool for mixing a plurality of different agents with each other, which are composed to self-foam and provide hair cosmetic foam when being mixed. The present invention also relates to a hair cosmetic kit and a hair cosmetic preparation method, and more specifically to a hair cosmetic kit including a plurality of different agents composed to self-foam and
20 prepare hair cosmetic foam when being mixed with each other and a hair cosmetic preparation method using such a hair cosmetic kit.

Related Art

[0003]

25 Two agent-type non-foam hair cosmetics (hair dye or hair decolorant) have been developed, where two different liquid or cream agents are mixed with each other using a tool, such as a spatula. The developed non-foam hair cosmetics have still room for improvement in easiness of application onto the hair.

30 [0004]

Aerosol-type hair cosmetics where two different agents are mixed

with each other and are ejected with aerosol propellant in the form of hair cosmetic foam, as well as foaming container-type hair cosmetics where two different agents are contained in a special foaming container to provide hair cosmetic foam by the function of the foaming container have been proposed
5 to prepare hair cosmetic foam and thereby facilitate the application onto the hair (see, for example, JP2009-149325A).

[0005]

The aerosol-type hair cosmetics, however, have the potentials of corrosion and increased internal pressure of the pressure container due to
10 the use of the aerosol propellant and it is a bit troublesome to dispose the pressure container after the use. The foaming container-type hair cosmetics, on the other hand, have difficulty in forming fine hair cosmetic foam due to the features of the foaming container and have rather high possibility of dripping-off during application of the hair cosmetic foam due to
15 the relatively low viscosity limit of foamable hair cosmetics.

[0006]

There are also known shaking-type hair cosmetics, where two different agents are shaken together in one container to let a large amount of surface-active agent contained in the agent introduce the air into the
20 shaken agents to prepare hair cosmetic foam. The shaking-type hair cosmetics take advantage of the function of the surface-active agent contained in the agent and thus enable preparation of hair cosmetic foam without using any special container or any special aerosol propellant.

[0007]

25 The shaking-type hair cosmetics, however, require much task of shaking and accordingly have still room for improvement in usability. The shaking-type hair cosmetics also have the relatively high possibility of uneven foam formation and the resulting occurrence of foam dripping-off during application of the hair cosmetic foam. The shaking-type hair
30 cosmetics prepare hair cosmetic foam by shaking the two agents inside the container and accordingly have still room for improvement in visual effect.

These problems are not restricted to mixing two different agents but are commonly found in any application of mixing a plurality of different agents with each other to prepare hair cosmetic foam.

5 SUMMARY

[0008]

By taking into account at least part of the issue discussed above, an object of the present invention is to provide a technique for enhancing the mixing efficiency and ensuring substantially homogeneous foam formation in the process of mixing a plurality of different agents with each other, which are composed to self-foam and provide hair cosmetic foam when being mixed. Another object of the present invention is to provide a technique for saving the task of the user and enhancing the visual effect in the process of mixing a plurality of different agents with each other, which are composed to self-foam and provide hair cosmetic foam when being mixed.

[0009]

According to one aspect of the present invention, there is provided a tool for mixing a plurality of different agents with each other, which are composed to self-foam and provide hair cosmetic foam when being mixed. The tool has a flat plate member. A plurality of apertures are arranged in vicinity of a specific end of the flat plate member and are formed to pass through the flat plate member in a thickness direction.

[0010]

The tool according to this aspect of the invention has the flat plate member, which enables the plurality of different agents to be mixed with each other more efficiently, compared with the arrangement of shaking the plurality of agents together in one container or the arrangement of mixing the plurality of agents with each other using a non-flat tool, such as a spoon. The tool of the invention has the plurality of apertures arranged in the vicinity of the specific end of the flat plate member and formed to pass through the flat plate member in the thickness direction. The plurality of

agents thus go through the apertures when being mixed. The tool of the invention accordingly has the higher mixing efficiency and prevents the produced foam from being crushed, thus readily mixing a plurality of different viscous agents with each other to form fine foam. The tool of the invention thus enhances the mixing efficiency and ensures substantially homogeneous foam formation in the process of mixing the plurality of different agents with each other, which are composed to self-foam and provide hair cosmetic foam when being mixed.

[0011]

10 In one preferable aspect of the present invention, a first projection is formed around each of at least some apertures selected among the plurality of apertures to be protruded in the thickness direction of the flat plate member.

[0012]

15 The tool of this aspect has the first projections protruded in the thickness direction of the flat plate member and formed around at least some apertures selected among the plurality of apertures. This arrangement effectively prevents the scoop of the prepared hair cosmetic foam from dripping off, thus enhancing the usability.

20 [0013]

In one preferable aspect of the present invention, a second projection is formed around outer periphery in the vicinity of the specific end of the flat plate member to be protruded in the thickness direction of the flat plate member.

25 [0014]

The tool of this aspect has the second projection protruded in the thickness direction of the flat plate member and formed around the outer periphery in the vicinity of the specific end of the flat plate member. This arrangement enables the prepared hair cosmetic foam to be scooped up efficiently and prevents the scoop of the hair cosmetic foam from dripping off, thus further enhancing the usability.

[0015]

In one preferable aspect of the present invention, the second projection is formed to have a higher protrusion in the thickness direction at a position closer to the specific end of the flat plate member.

5 [0016]

In the tool of this aspect, the second protrusion is formed to have the higher protrusion in the thickness direction at the position closer to the specific end of the flat plate member. This arrangement enables the hair cosmetic foam to be scooped up more efficiently and more effectively prevents the scoop of the hair cosmetic foam from dripping off, thus further enhancing the usability.

[0017]

In one preferable aspect of the present invention, the tool is used to mix the plurality of different agents placed in a mixing vessel. Outer periphery in the vicinity of the specific end of the flat plate member is conformed to a specific inner surface of the mixing vessel from at least part of an inner bottom face to at least part of an inner side face.

[0018]

In the tool of this aspect, the outer periphery in the vicinity of the specific end of the tool is conformable with the specific inner face of the mixing vessel. This arrangement enables the hair cosmetic foam to be scooped up efficiently without waste, thus further enhancing the usability.

[0019]

According to one aspect of the present invention, there is provided a hair cosmetic kit including: a plurality of different agents separately contained in respective containers and composed to self-foam and prepare hair cosmetic foam when being mixed; a mixing vessel; and a flat-plate tool used to mix the plurality of different agents placed from the respective containers into the mixing vessel.

30 [0020]

The hair cosmetic kit according to this aspect of the invention

includes the plurality of different agents separately contained in the respective containers and composed to self-foam and prepare hair cosmetic foam when being mixed. The hair cosmetic kit also includes the mixing vessel and the flat-plate tool used to mix the plurality of different agents placed from the respective containers into the mixing vessel. The user is simply required to manipulate the tool for mixing the plurality of different agents placed in the mixing vessel, so as to prepare the hair cosmetic foam. The hair cosmetic kit of this aspect thus effectively saves the task of the user to prepare the hair cosmetic foam. The hair cosmetic kit of this aspect enables the user to view the process of mixing the plurality of different agents to gradually effervesce and generate the hair cosmetic foam. This effectively enhances the visual effect.

[0021]

According to one aspect of the present invention, there is provided a hair cosmetic preparation method, which includes (a) providing a plurality of different agents separately contained in respective containers and composed to self-foam and prepare hair cosmetic foam when being mixed; (b) placing the plurality of different agents from the respective containers into a mixing vessel; and (c) mixing the plurality of different agents placed in the mixing vessel using a flat-plate tool to prepare the hair cosmetic foam.

[0022]

The hair cosmetic preparation method according to this aspect of the invention places the plurality of different agents, which are separately contained in the respective containers and are composed to self-foam and prepare hair cosmetic foam when being mixed, from the respective containers into the mixing vessel, and mixes the plurality of different agents placed in the mixing vessel using the flat-plate tool to prepare the hair cosmetic foam. This method enables preparation of the hair cosmetic foam by simply mixing the plurality of different agents placed in the mixing vessel using the tool. This method thus effectively saves the task of the user to prepare the hair cosmetic foam. The hair cosmetic preparation

method of this aspect enables the user to view the process of mixing the plurality of different agents to gradually effervesce and generate the hair cosmetic foam. This effectively enhances the visual effect.

[0023]

5 The technique of the present invention is not restricted to the tool having any of the configurations and arrangements discussed above but may be actualized by diversity of other applications, for example, a tool for hair cosmetics, a hair cosmetic kit including a said tool for hair cosmetics, and a hair cosmetic preparation method using a said tool for hair cosmetics
10 or the hair cosmetic kit.

[0024]

 These and other objects, features, aspects, and advantages of the present invention will become more apparent from the following detailed description of the preferred embodiments with the accompanying drawings.

15

BRIEF DESCRIPTION OF THE DRAWINGS

[0025]

 Fig. 1 is an explanatory diagrammatic representation of a hair cosmetic kit 10 in one embodiment of the present invention;

20 Fig. 2 is a flowchart of a hair cosmetic preparation process using the hair cosmetic kit 10;

 Fig. 3 is an explanatory diagrammatic representation of hair cosmetic preparation from the hair cosmetic kit 10;

25 Fig. 4 is an explanatory diagrammatic representation of hair cosmetic preparation from the hair cosmetic kit 10;

 Fig. 5 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200;

 Fig. 6 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200;

30 Fig. 7 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200;

Fig. 8 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200;

Fig. 9 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200;

5 Fig. 10 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200;

Fig. 11 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200; and

10 Fig. 12 is an explanatory diagrammatic representation of the detailed structure of the mixing tool 200.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0026]

Some modes of carrying out the invention are discussed below.

15

A. Embodiment

A-1. Hair Cosmetic Kit

[0027]

20 Fig. 1 is an explanatory diagrammatic representation of a hair cosmetic kit 10 in one embodiment of the present invention. The hair cosmetic kit 10 includes a mixing vessel 100, a mixing tool 200, a first agent 300, and a second agent 400.

[0028]

25 The first agent 300 and the second agent 400 are liquid or cream agents separately contained in respective containers (e.g., tube containers). The compositions of the first agent 300 and the second agent 400 are determined such as to generate hair cosmetic foam (hair dye or decolorant) when being mixed with each other. The first agent 300 contains a carbonate (e.g., sodium hydrogen carbonate) as its component, while the
30 second agent 400 contains an acid for decomposing the carbonate as its component. Mixing the first agent 300 with the second agent 400 causes

the carbonate contained in the first agent 300 to react with the acid contained in the second agent 400 and effervesces (i.e. produces bubbles of carbon dioxide).

[0029]

5 The mixing vessel 100 is a cup-like container for holding the first agent 300 and the second agent 400 to be mixed with each other and is made of a resin (e.g., polypropylene or PP). The mixing tool 200 is a plate-like or more specifically spatulate tool used to mix the first agent 300 and the second agent 400 held in the mixing vessel 100 and is made of a
10 resin (e.g., PP). The structure of the mixing tool 200 is described later in detail.

A-2. Hair Cosmetic Preparation Process

[0030]

15 Fig. 2 is a flowchart of a hair cosmetic preparation process using the hair cosmetic kit 10. Figs. 3 and 4 are explanatory diagrammatic representations of hair cosmetic preparation from the hair cosmetic kit 10.

[0031]

 The process first provides the hair cosmetic kit 10 including the
20 mixing vessel 100, the mixing tool 200, the first agent 300, and the second agent 400 as shown in Fig. 1(step S110) and places the first agent 300 and the second agent 400 from the respective containers into the mixing vessel 100 (step S120). Fig. 3 shows the operation of placing the first agent 300 and the second agent 400 from the respective containers into the mixing
25 vessel 100.

[0032]

 The process subsequently mixes the first agent 300 and the second agent 400 with each other in the mixing vessel 100 using the mixing tool 200 (step S130). Fig. 3 also shows the operation of mixing the first agent
30 300 with the second agent 400 using the mixing tool 200. Mixing the first agent 300 and the second agent 400 with each other using the mixing tool

200 causes the carbonate contained in the first agent 300 to react with the acid contained in the second agent 400 and effervesces (i.e. produces bubbles of carbon dioxide). This series of operations eventually prepare hair cosmetic foam in the mixing vessel 100. Fig. 4 shows the hair cosmetic foam FO thus prepared in the mixing vessel 100. As shown in Fig. 4, the mixing tool 200 is also used as a tool of scooping up the hair cosmetic foam FO from the mixing vessel 100. The user manipulates the mixing tool 200 to scoop up the hair cosmetic foam FO, takes up the hair cosmetic foam FO from the mixing tool 200 onto the hand, and applies the hair cosmetic foam FO on the hair.

[0033]

As described above, the hair cosmetic preparation process using the hair cosmetic kit 10 of the embodiment readily prepares hair cosmetic foam without requiring any special container or any special aerosol propellant by simply mixing the plurality of different agents with each other, which are composed to self-foam and provide the hair cosmetic foam when being mixed. The user is not required to perform any specialized operation, such as shaking agents contained in the containers, but is simply required to stir the first agent 300 and the second agent 400 contained in the mixing vessel 100 with the mixing tool 200. The hair cosmetic preparation process using the hair cosmetic kit 10 of the embodiment enables the user to view the process of mixing the plurality of different liquid or cream agents to gradually effervesce and generate the hair cosmetic foam FO. This has the visual effect to raise expectations of the user (e.g., fun and excitement).

A-3. Detailed Structure of Mixing Tool

[0034]

Figs. 5 through 12 are explanatory diagrammatic representations of the detailed structure of the mixing tool 200. Fig. 5 is a front view of the mixing tool 200, Fig. 6 is a right side view of the mixing tool 200, Fig. 7 is a bottom view of the mixing tool 200, and Fig. 8 is a plan view of the mixing

tool 200. A rear view of the mixing tool 200 is similar to the front view of Fig. 5. A left side view of the mixing tool 200 is similar to the right side view of Fig. 6. Fig. 9 is a cross sectional view of the mixing tool 200, taken on a line A-A of Fig. 5. Fig. 10 is a cross sectional view of the mixing tool 200, taken on a line B-B of Fig. 5. Fig. 11 is an enlarged sectional view of a part X shown in Fig. 10. Fig. 12 is an explanatory diagrammatic representation of the shape of the mixing tool 200 relative to the shape of the mixing vessel 100.

[0035]

As shown in Figs. 5 and 6, the mixing tool 200 includes a flat plate member 210 having substantially constant thickness "t0" of, for example, 2 mm, over the whole length. The flat plate member 210 has a spatulate outer shape (like the longitudinal section of a bowling pin) in the front view. The outer shape in the front view of the flat plate member 210 includes a lower end section TP of a width "wt" linked to an upper end section BP of a width "wb", which is smaller than the width "wt", across a constricted intermediate section IP. The width "wt" of the lower end section TP is, for example, 40 mm, and the width "wb" of the upper end section BP is, for example, 25 mm. The narrowest width of the constricted intermediate section IP is, for example, 20 mm. The mixing tool 200 has a height of, for example, 170 mm.

[0036]

As shown in Figs. 5, 10, and 11, the flat plate member 210 has a plurality of circular apertures 240 arranged in its lower end section TP and formed to pass through the flat plate member 210 in its thickness direction. The number of the apertures 240 is, for example, 29, and the diameter of each of the apertures 240 is, for example, 5 mm. Each of the apertures 240 may be designed in a specific shape that varies the diameter from the front side toward the rear side of the flat plate member 210 (i.e., each of the apertures 240 has an inclined inner side face). In this application, each of the apertures 240 may be tapered to have varying diameter from 5 mm on

the front side of the flat plate member 210 to 4.9 mm on the rear side of the flat plate member 210.

[0037]

As shown in Fig. 11, a first projection (a first convex portion) 242 is formed on each surface around each of the apertures 240. The first projection 242 refers to a protrusion from the front side surface or from the rear side surface in the thickness direction of the flat plate member 210. Each of the first projections 242 has a ring shape in the front view surrounding the entire circumference of the aperture 240 (Fig. 5).

10 [0038]

The mixing tool 200 has thickness "tc" of, for example, 3 mm at the position of the first projections 242. The projection of each of the first projections 242 from the surface of the flat plate member 210 is, for example, 0.5 mm. Each of the first projections 242 has a width (i.e., lateral length in the sectional view of Fig. 11) of, for example, 0.5 mm. Each of the first projections 242 may be tapered to have the less width at the farther position from the surface of the flat plate member 210. The outer corner on the top of each of the first projections 242 may have a curved shape.

[0039]

20 As shown in Figs. 5, 6, 7, and 8, a second projection (a second convex portion) 220 is formed on each surface around the outer periphery of the flat plate member 210. The second projection 220 refers to a protrusion from the front side surface or from the rear side surface in the thickness direction of the flat plate member 210. Each of the second projections 220 has a specific shape in the front view surrounding the entire outer periphery of the flat plate member 210.

25 [0040]

The thickness of the mixing tool 200 at the position of the second projections 220 is different between a lowest end section MTP and the remaining section (hereafter also referred to as "base section"). The lowest end section MTP refers to a lowest end part of the lower end section TP.

The base section of the mixing tool 200 has substantially constant thickness "tb" of, for example, 3 mm, at the position of the second projections 220 (Figs. 6 and 8). The lowest end section MTP of the mixing tool 200 has varying thickness at the position of the second projections 220 to have the greater thickness at the position closer to the lower end of the flat plate member 210 (Fig. 6). Each of the second projections 220 is thus formed to have the higher protrusion in the thickness direction at the position closer to the lower end of the flat plate member 210. The mixing tool 200 has maximum thickness "tt" of, for example, 10 mm at the position of the second projections 220.

[0041]

As shown in Figs. 5 and 9, a third projection (a third convex portion) 230 is formed on each surface over the upper end section BP and the intermediate section IP of the flat plate member 210. The third projection 230 refers to a protrusion from the front side surface or from the rear side surface in the thickness direction of the flat plate member 210. Each of the third projections 230 has a line shape in the front view to be arranged along the second projection 220 and to have a width of, for example, 3 mm. The thickness of the mixing tool 200 at the position of the third projections 230 is, for example, 3 mm.

[0042]

As shown in Figs. 5 and 9, two fourth projections (fourth convex portions) 250 are formed on each surface in a central region in the width direction of the intermediate section IP of the flat plate member 210. The fourth projection 250 refers to a protrusion from the front side surface or from the rear side surface in the thickness direction of the flat plate member 210. The two fourth projections 250 have substantially straight line shapes to be arranged parallel to each other and to have a width of, for example, 2 mm. The thickness of the mixing tool 200 at the position of the fourth projections 250 is, for example, 3 mm.

[0043]

As shown in Fig. 12, the outer periphery in the vicinity of the lower end of the flat plate member 210 of the mixing tool 200 is conformed to a specific inner face part between at least part of the inner bottom face and at least part of the inner side face of the mixing vessel 100. The shape of the mixing vessel 100 and the shape of the mixing tool 200 are designed, such that a lower-end corner of the mixing tool 200 is conformable with the lower corner of the inner face of the mixing vessel 100, when the mixing tool 200 is inserted in a substantially upright state into the mixing vessel 100 and is moved along the inner face of the mixing vessel 100 in the state that the lower end of the mixing tool 200 is in contact with the inner bottom face of the mixing vessel 100.

[0044]

As described above, the mixing tool 200 of the embodiment has the flat plate member 210, which enables the first agent 300 and the second agent 400 to be mixed with each other more efficiently, compared with the arrangement of shaking the two agents together in one container or the arrangement of mixing the two agents with each other using a non-flat tool, such as a spoon. The mixing tool 200 of the embodiment has the plurality of apertures 240 arranged in the vicinity of the lower end of the flat plate member 210 and formed to pass through the flat plate member 210 in the thickness direction. The two agents accordingly go through the apertures 240 when being mixed. The mixing tool 200 of the embodiment accordingly has the higher mixing efficiency and prevents the produced bubbles from being crushed, thus readily mixing a plurality of different viscous agents with each other to form fine foam. The mixing tool 200 of the embodiment enhances the mixing efficiency and ensures substantially homogeneous foam formation in the process of mixing a plurality of different agents with each other, which are composed to self-foam and provide hair cosmetic foam when being mixed. The substantially homogeneous foam formation preferably prevents uneven hair decolorizing or uneven hair dying.

[0045]

The mixing tool 200 of the embodiment has the first projections 242 formed around the respective apertures 240 and protruded in the thickness direction of the flat plate member 210. This arrangement prevents the scoop of the prepared hair cosmetic foam FO from dripping off, thus enhancing the usability.

[0046]

The mixing tool 200 of the embodiment has the second projections 220 formed around the outer periphery of the flat plate member 210 and protruded in the thickness direction of the flat plate member 210. This arrangement enables the prepared hair cosmetic foam FO to be scooped up efficiently and effectively prevents the scoop of the hair cosmetic foam FO from dripping off, thus further enhancing the usability. In the mixing tool 200 of the embodiment, the second projections 220 are formed to have the higher protrusions in the thickness direction at the position closer to the lower end of the flat plate member 210. This arrangement enables the hair cosmetic foam FO to be scooped up more efficiently and more effectively prevents the scoop of the hair cosmetic foam FO from dripping off, thus further enhancing the usability.

[0047]

In the mixing tool 200 of the embodiment, the outer periphery in the vicinity of the lower end of the flat plate member 210 is conformed to the specific inner face part between at least part of the inner bottom face and at least part of the inner side face of the mixing vessel 100. The lower-end corner of the mixing tool 200 is conformable with the lower corner of the inner face of the mixing vessel 100. This arrangement enables the hair cosmetic foam FO to be scooped up efficiently without waste, thus further enhancing the usability.

B. Modifications

[0048]

The invention is not limited to the embodiment and its applications

discussed above but may be actualized in diversity of other embodiments and applications within the scope of the invention. Some examples of possible modification are given below.

[0049]

5 The hair cosmetic kit 10 of the embodiment is only one illustrative example and may be modified, changed, or altered in various ways. For example, the hair cosmetic kit 10 may include one or more additional agents other than the first agent 300 and the second agent 400. In this modification, all the agents placed in the mixing vessel 100 are mixed
10 together using the mixing tool 200 to prepare hair cosmetic foam.

[0050]

 In the embodiment discussed above, the mixing vessel 100 and the mixing tool 200 are made of resin material. The mixing vessel 100 and/or the mixing tool 200 may be made of other materials (for example, metal
15 material).

[0051]

 The structure of the mixing tool 200 of the embodiment is only one illustrative example and may be modified, changed, or altered in various ways. For example, the number and the diameter of the apertures 240
20 formed in the flat plate member 210 of the mixing tool 200 may be varied or changed as appropriate. Each of the apertures 240 is not restrictively formed in circular shape but may be formed in elliptical shape or in polygonal shape.

[0052]

25 The first projections 242 formed around the respective apertures 240 may be provided on at least one surface of the flat plate member 210 (for example, only on the front side surface). The first projections 242 may be formed around only some apertures 240 selected among the plurality of apertures 240. The first projection 242 may not be necessarily formed to
30 surround the entire circumference of the aperture 240 but may be formed along only part of the circumference of the aperture 240. Forming the first

projection 242 around the aperture 240 accordingly means forming the first projection 242 along at least part of the entire circumference of the aperture 240.

[0053]

5 The second projections 220 formed along the outer periphery of the flat plate member 210 may be provided on at least one surface of the flat plate member 210 (for example, only on the front side surface). The second projection 220 may not be necessarily formed to surround the entire outer periphery of the flat plate member 210 but may be formed only in the
10 vicinity of the lowest section MTP. The protrusion of the second projection 220 may be constant over the entire outer periphery of the flat plate member 210.

[0054]

 The mixing tool 200 may be designed without the first projections
15 242, the second projections 220, or the third projections 230.

WHAT IS CLAIMED IS:

1. A tool for mixing a plurality of different agents with each other,
which are composed to self-foam and provide hair cosmetic foam when
5 being mixed, comprising:

a flat plate member,

wherein a plurality of apertures are arranged in vicinity of a
specific end of the flat plate member and are formed to pass through the
flat plate member in a thickness direction, and

10 a first projection is formed around each of at least some apertures
selected among the plurality of apertures to be protruded in the thickness
direction of the flat plate member.

15 2. The tool in accordance with either one of claim 1,

wherein a second projection is formed around outer periphery in
the vicinity of the specific end of the flat plate member to be protruded in
the thickness direction of the flat plate member.

20 3. The tool in accordance with claim 2,

wherein the second projection is formed to have a higher protrusion
in the thickness direction at a position closer to the specific end of the flat
plate member.

25 4. The tool in accordance with claim 1,

wherein the tool is used to mix the plurality of different agents
placed in a mixing vessel, and

outer periphery in the vicinity of the specific end of the flat plate
member is conformed to a specific inner surface of the mixing vessel from
30 at least part of an inner bottom face to at least part of an inner side face.

5. A hair cosmetic kit, comprising:

a plurality of different agents separately contained in respective containers and composed to self-foam and prepare hair cosmetic foam when
5 being mixed;

a mixing vessel; and

a flat-plate tool used to mix the plurality of different agents placed from the respective containers into the mixing vessel,

wherein a plurality of apertures are arranged in vicinity of a
10 specific end of the flat-plate tool and are formed to pass through the flat-plate tool in a thickness direction, and

a first projection is formed around each of at least some apertures selected among the plurality of apertures to be protruded in the thickness direction of the flat-plate tool.

15

6. A hair cosmetic preparation method, comprising:

(a) providing a plurality of different agents separately contained in respective containers and composed to self-foam and prepare hair cosmetic foam when being mixed;

20 (b) placing the plurality of different agents from the respective containers into a mixing vessel; and

(c) mixing the plurality of different agents placed in the mixing vessel using a flat-plate tool to prepare the hair cosmetic foam,

wherein a plurality of apertures are arranged in vicinity of a
25 specific end of the flat-plate tool and are formed to pass through the flat-plate tool in a thickness direction, and

a first projection is formed around each of at least some apertures selected among the plurality of apertures to be protruded in the thickness direction of the flat-plate tool.

30