Aug. 18, 1936. F. M. WINKEL 2,051,063

HAIR WAVING UNIT

Original Filed Oct. 28, 1930 2 Sheets-Sheet 1

Fig. 1.

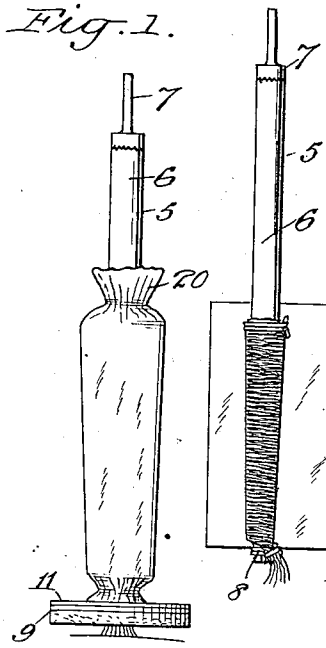


Fig. 2.

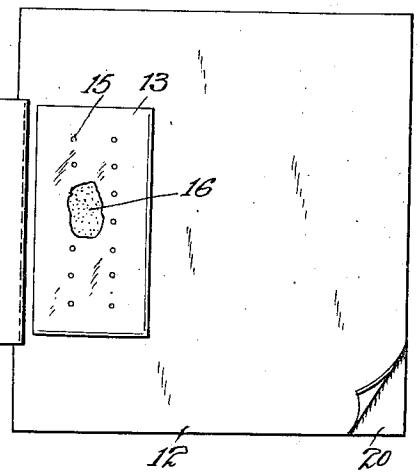
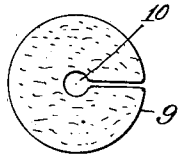


Fig. 5.



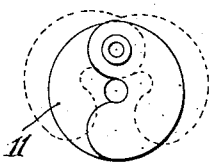


Fig. 6.

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Fig. 3.

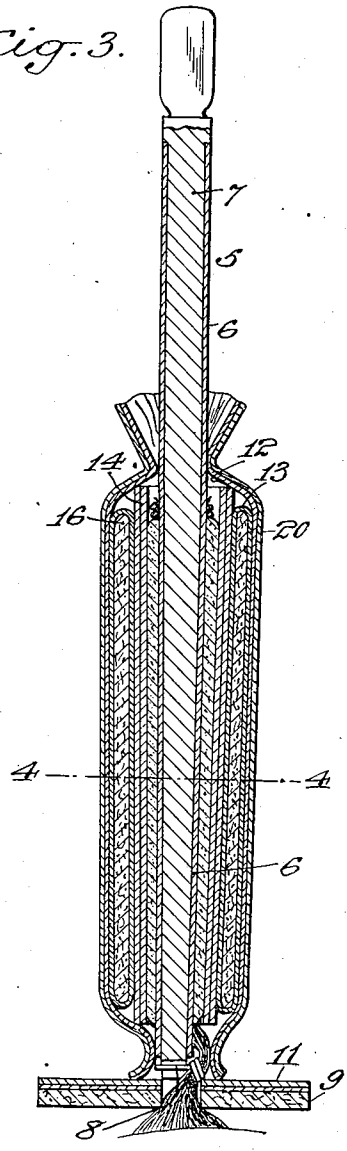


Fig. 7.

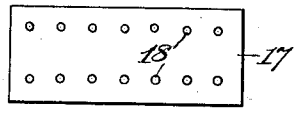
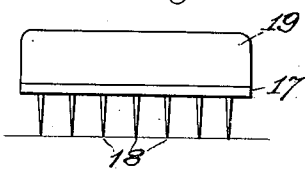


Fig. 8.



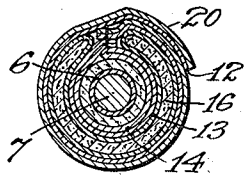


Fig. 4.

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Patented Aug. 18, 1936

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UNITED STATES PATENT OFFICE

2,051,063

HAIR WAVING UNIT

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Continuation of application Serial No. 491,781, October 28, 1930. This application January 19, 1932, Serial No. 587,454

40 Claims. (Cl. 132—36.2)

This invention relates to new and useful improvements in means for and method of permanently waving hair. This application is a continuation of application Serial No. 491,781, filed October 28, 1930.

One object of this invention is to provide a hair waving device wherein a chemical reaction is utilized for creating a vapor of sufficient heat to permanently wave the hair.

Another object of the invention is to provide a permanent hair waving device wherein means are provided for completing the operations required in the waving of hair, without the application of external heating devices.

Another object of the invention resides in the provision of a permanent waver which can be easily handled and manipulated in operation and which does not require any fastening means for maintaining the same intact on the hair while the hair is being treated thereby.

These and various other important objects and advantages of the invention will be more fully described hereinafter.

In the drawings:

Fig. 1 represents a side elevation of the waver as in use;

Fig. 2 represents an inside plan view of the waver with the parts in the positions they assume when the waver is about to be wrapped around the preformed tress;

Fig. 3 represents a longitudinal sectional view through the waver when in use;

Fig. 4 represents a cross sectional view taken in the plane of the line 4—4 of Fig. 3;

Fig. 5 represents a top plan view of the head protecting gasket;

Fig. 6 represents a top plan view of the scalp shield;

Fig. 7 represents a bottom plan view of the perforator; and

Fig. 8 represents a side elevational view of the perforator.

Referring to the drawings, wherein like numerals designate like parts, the numeral 5 indicates the winding implement which may be made up in the usual way, said implement comprising a barrel 6 and a hand operated stem 7 extending therethrough, to one end of which the hair may be tied as shown in Fig. 3 and denoted by the numeral 8. The foregoing is conventional and the following represents the invention which is associated therewith in the permanent waving of hair.

Figs. 5 and 6 also show conventional fixtures, the numeral 9 representing a slit gasket through the central opening 10 of which the hair is passed. The scalp shield is denoted by 11. The gasket 9 serves as a protector for the head by insulating the heat from the scalp.

In carrying out the present invention, the sheet 12 of some suitable material as paper has the sachet 13 suitably secured thereto adjacent to one edge thereof. This sachet is of impervious material as metal foil and it contains a suitable chemical 16 such as calcium oxide or calcium oxide compounds, which is intended to be combined with a liquid, such as ammonium hydroxide, to develop heat sufficient to permanently wave the hair. This ammonium hydroxide may be applied to the sachet by providing an apron 14 adapted to be moistened by the said ammonium hydroxide; the sachet being perforated as shown at 15 to permit the moisture from the apron 14 to reach the heat generating chemical contained in the sachet.

A perforating implement may be provided for perforating the sachet 13, which implement is shown in Figs. 7 and 8 of the drawings and comprises a backing 17, prongs 18 and handle 19.

An outer sheet 20 may be secured to the sheet 12, the outer sheet being preferably of some impervious material such, for instance, as metal foil.

I do not wish to limit myself to the particular heating chemical employed nor to its co-reagent.

One way of utilizing the hair waving device would be as follows: The apron 14 is moistened and the preformed tress is placed thereon, as shown in Fig. 2. The apron is then wrapped around the tress and the sachet 13 is perforated. The combined sheets 12 and 20 are then wrapped around the preformed tress and apron 14 and the moisture from the apron is transmitted to the heating chemical 16 through the perforations 15, thereby causing the chemical to react exothermically to generate sufficient heat to permanently wave the preformed tress.

The sheets 12 and 20 may be clinched at their upper and lower ends in the manner shown in Fig. 1 to prevent the escape of the vapor generated within the device. The nature of the sheet 20 will permit the device to retain its wrapped condition around the preformed tress during the steaming or heating operation.

It will be seen that no source of outside heat is required in connection with my improved hair waving device and that the expense is materially reduced owing to the fact that the expense of repair ordinarily required in devices where outside heat is used, is eliminated.

While the foregoing specification sets forth the invention in more or less specific terms, it will be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

It will be understood that the term "perforable" as used herein, refers broadly to the character of the material constituting the exposed face of the envelope, whether said face is perforated at the time of manufacture or left imperforate until the time of use, or perforated at some intermediate time.

What I claim is:—

1. A hair waving pad comprising a sheet, a perforable sachet thereon containing a heat producing chemical, and an apron projecting from the sheet and adapted to be moistened and folded over onto the sachet after it is perforated, to coact with said chemical to cause it to act exothermically.

2. A hair waving pad comprising a sheet, a perforable sachet of metal foil thereon containing a heat producing chemical, and an apron projecting from the sheet and adapted to be moistened and folded over onto the sachet after it is perforated, to coact with said chemical to cause it to act exothermically.

3. A hair waving pad comprising a sheet, a perforable sachet of metal foil thereon containing calcium oxide, and an apron projecting from the sheet and adapted to be moistened and folded over onto the sachet after it is perforated, to coact with said chemical to cause it to act exothermically.

4. A hair waving pad comprising a backing sheet, a sheet associated therewith, a perforable sachet containing a heat producing chemical, and an apron projecting from the second sheet and adapted to be moistened and folded over onto the sachet after it is perforated, to coact with said chemical to cause it to act exothermically.

5. A hair waving pad comprising a backing sheet of metail foil, a sheet associated therewith, a perforable sachet of metal foil containing a heat producing chemical, and an apron projecting from the second sheet and adapted to be moistened and folded over onto the sachet after it is perforated, to coact with said chemical to cause it to act exothermically.

6. A hair waving pad comprising a backing sheet, a sheet associated therewith, a perforable sachet containing calcium oxide, and an apron projecting from the second named sheet and adapted to be moistened and folded over onto the sachet after it is perforated to coact with said calcium oxide to cause it to act exothermically.

7. A hair waving pad comprising a backing sheet, a sheet associated therewith, a perforable sachet of metal foil containing calcium oxide, and an apron projecting from the second named sheet and adapted to be moistened and folded over onto the sachet after it is perforated, to coact with said calcium oxide to cause it to act exothermically.

8. A hair waving pad comprising a backing sheet, a sheet associated therewith, a perforated sachet of metal foil containing calcium oxide, and an apron projecting from the second named sheet and moistened with ammonium hydroxide and adapted to be folded over onto the sachet to coact with said calcium oxide to cause it to act exothermically.

9. An article of manufacture comprising a flexible sheet, a sheet of ductile material for covering the entire side of the flexible sheet, a sachet on the flexible sheet, a heat producing chemical in the sachet, and an apron secured at one end to the sheet adjacent the sachet and to which a hair treating chemical can be applied.

10. A permanent waver comprising a sheet of suitable material, a deposit of calcium oxide on the sheet, and an apron extending from the sheet and having a deposit of ammonium hydroxide thereon as a co-reagent for generating heat by reacting with the calcium oxide on the sheet.

11. A process for the permanent waving of hair consisting in enclosing a pre-formed tress in a pad containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, moistening a sheet and interposing it between the tress and the chemical.

12. A process for the permanent waving of hair consisting in enclosing a pre-formed tress within an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, perforating the inner face of the chemical containing envelope and moistening the chemical.

13. A process for the permanent waving of hair consisting in enclosing a pre-formed tress within an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, perforating the inner face of the chemical containing envelope and moistening a sheet and interposing it between the tress and the envelope.

14. A process for the permanent waving of hair consisting in providing a pad having a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to a pre-formed tress, perforating the inner face of the chemical containing envelope, moistening the chemical and enclosing the tress in said pad.

15. A process for the permanent waving of hair consisting in providing a pad having a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to a pre-formed tress, perforating the inner face of the chemical containing envelope, moistening a sheet and applying it to said perforated inner face of the envelope and enclosing the tress in said pad.

16. A process for the permanent waving of hair consisting in providing a pad having an outer wrapper, an inner sheet of absorbent material and an interposed perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to a pre-formed tress, perforating the inner face of the envelope, moistening the inner absorbent sheet and enclosing the tress in said pad.

17. A process for the permanent waving of hair consisting in providing a pad having an outer wrapper of non-absorbent material, an inner sheet of absorbent material and an interposed perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to a pre-formed tress, perforating the inner face of the envelope,

moistening the inner absorbent sheet and enclosing the tress in said pad.

18. A hair waving pad adapted to enclose a pre-formed tress and comprising a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate heat sufficient to impart a permanent wave to the tress.

19. A hair waving pad adapted to enclose a pre-formed tress and comprising an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate heat sufficient to impart a permanent wave to the tress, said chemical containing envelope having its inner face perforated.

20. A hair waving pad adapted to enclose a pre-formed tress and comprising a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate heat sufficient to impart a permanent wave to the tress, and an inner sheet of absorbent material adapted to be interposed between the tress and the envelope.

21. A hair waving pad adapted to enclose a pre-formed tress and comprising an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate heat sufficient to impart a permanent wave to the tress, said chemical containing envelope having its inner face perforated, and an inner sheet of absorbent material adapted to be interposed between the tress and the envelope.

22. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper and a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress.

23. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper of non-absorbent material and a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress.

24. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper, a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, and an inner sheet of absorbent material adapted to be interposed between the tress and the envelope.

25. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper of non-absorbent material, a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, and an inner sheet of absorbent material adapted to be interposed between the tress and the envelope.

26. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper, an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, said chemical containing envelope having its inner face perforated.

27. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper of non-absorbent material, an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, said chemical containing envelope having its inner face perforated.

28. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper, an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, and an inner sheet of absorbent material adapted to be interposed between the tress and the envelope, said chemical containing envelope having its inner face perforated.

29. A hair waving pad adapted to enclose a pre-formed tress and comprising an outer wrapper of non-absorbent material, an envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, and an inner sheet of absorbent material adapted to be interposed between the tress and the envelope, said chemical containing envelope having its inner face perforated.

30. A hair waving pad adapted to enclose a pre-formed tress and comprising a perforable envelope of impervious material containing a heating chemical which, when moistened, will of itself generate sufficient heat to impart a permanent wave to said tress, said envelope being adapted to be wrapped around the tress.

31. As an article of manufacture, a hair waving pad comprising an envelope adapted to be perforated, a chemical therein having the property of generating heat when subjected to moisture and a member adapted to be moisture impregnated.

32. A hair waving device, comprising a perforable, hermetically sealed envelope, containing a chemical substance adapted to generate heat when moistened, said envelope being adapted to be wrapped around a coil of hair to generate heat for the permanent waving of said coil of hair.

33. A hair waving pad adapted to enclose a pre-formed tress and comprising a backing of flexible material and a flexible envelope containing an exothermic chemical adapted to generate sufficient heat to impart a permanent wave to said tress.

34. A hair waving pad adapted to enclose a pre-formed tress and comprising a backing of flexible material and a flexible envelope of impervious material containing an exothermic chemical adapted to generate sufficient heat to impart a permanent wave to said tress.

35. A hair waving pad adapted to enclose a pre-formed tress and comprising a backing of flexible material and a flexible envelope having an impervious face and containing an exothermic chemical adapted to generate sufficient heat to impart a permanent wave to said tress.

36. A hair waving pad adapted to enclose a pre-formed tress and comprising a backing of flexible material and a flexible envelope having an impervious perforable face and containing an exothermic chemical adapted to generate sufficient heat to impart a permanent wave to said tress.

37. A hair waving pad adapted to enclose a pre-formed tress and comprising a backing of flexible material and a flexible envelope having an impervious perforable face of foil and containing an exothermic chemical adapted to generate sufficient heat to impart a permanent wave to said tress.

38. A hair waving pad comprising a flexible envelope having an impervious perforable face and containing an exothermic material.

39. A hair waving pad comprising a flexible envelope, at least one face of which is impervious, said envelope containing an exothermic material.

40. A hair waving pad comprising a flexible envelope containing an exothermic material, one face of said envelope being impervious and the other face being of a nature to permit the passage of moisture.

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