

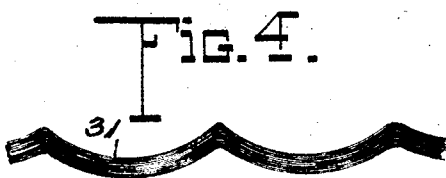
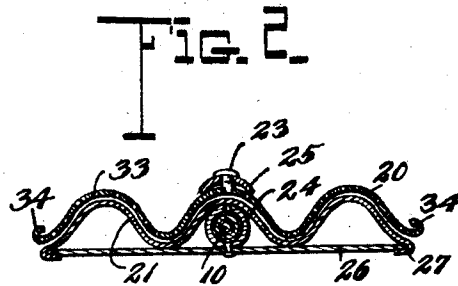
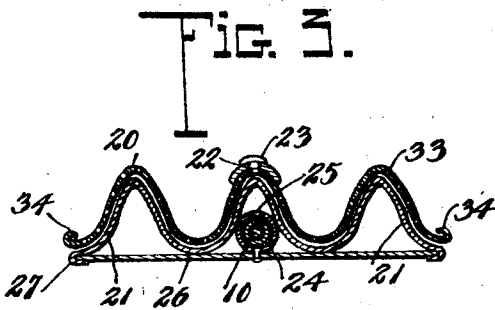
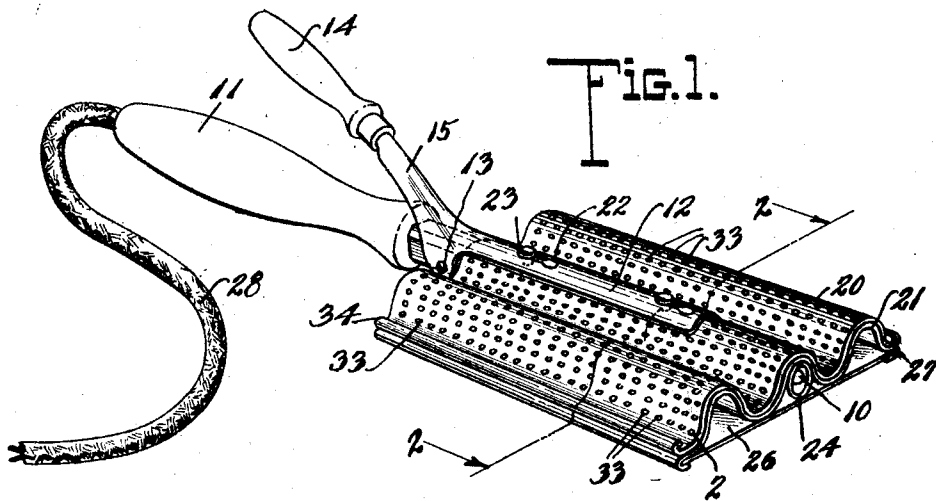
July 6, 1926.

1,591,207

A. L. BERTHELSEN

INTERCHANGEABLE HAIR WAYER AND DRIER

Original Filed Feb. 18, 1924 2 Sheets-Sheet 1



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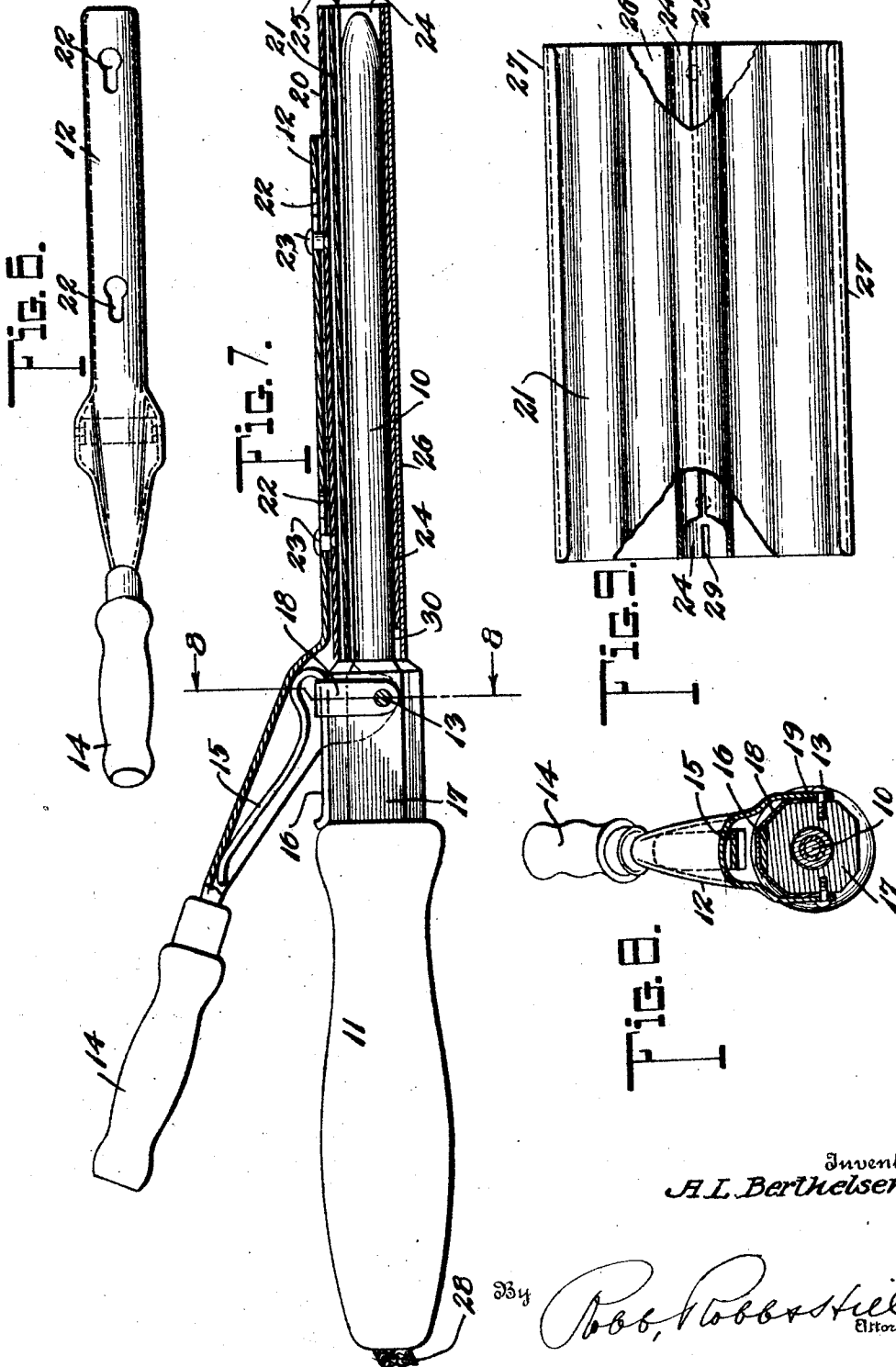
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INTERCHANGEABLE HAIR WAYER AND DRIER

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UNITED STATES PATENT OFFICE.

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INTERCHANGEABLE HAIR WAVER AND DRIER.

Application filed February 18, 1924, Serial No. 693,707. Renewed November 30, 1925.

This invention relates to an interchangeable hair waver and drier, and particularly to a construction in which one set of wave producing members may be removed from the heating and clamping members and replaced by other members to effect a different form of wave.

In prior constructions of this character the wave plates have been fixed in position upon the cooperating heating and clamping devices and a separate device was required for each character of wave desired while no provision was made for drying the hair which had been previously moistened before the waving operation. Also such prior constructions were not adapted for application to a curling iron of the ordinary type which is capable of use for curling purposes when required by the simple removal of the wave producing plates.

The invention has for an object to provide a novel and improved construction comprising cooperating heating and clamping members having detachably mounted thereon wave forming members to produce a wave in the hair treated thereby.

A further object of the invention is to provide an improved construction of the wave producing plates by which at least one thereof is formed with apertures to permit the escape of moisture as the hair is heated in forming the wave and incidentally dries the hair during such operation.

A further object of the invention is to provide a novel construction embodying a plurality of wave producing plates adapted to be detachably and interchangeably mounted upon the heating and clamping members of a curling iron and held against movement transversely of said members.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings:—

Figure 1 is a perspective of the invention;

Figure 2 is a section on line 2—2 of Figure 1;

Figure 3 is a similar view of a modified form of the plates;

Figure 4 is a detail of the form of wave produced by the plates shown in Figure 3;

Figure 5 is a similar view of the wave produced by the plates illustrated in Figure 2;

Figure 6 is a top plan of the clamping member of the curling iron;

Figure 7 is a longitudinal section through the assembled parts;

Figure 8 is a section on line 8—8 of Figure 7; and

Figure 9 is a top plan of the lower wave plate with parts broken away.

Like numerals refer to like parts throughout the several figures of the drawing.

The invention is adapted for application to any desired form of heating and clamping members but is particularly designed for use in connection with the conventional type of curling iron having a heated member or mandril 10 carried by a handle 11 and cooperating with a clamping member or finger 12 pivotally mounted at 13 upon the handle portion and provided with an operating handle 14. This clamping member is normally held in contact with the heating member 10 by means of a spring 15 which is here shown as of looped construction with the lower member 16 disposed in extended contact with the shank 17 of the handle and clamped in position thereon by means of a U-clip 18 extending over the shank and provided with portions 19 through which the pivots 13 for the clamping member extend. Such a construction firmly holds the spring in position and prevents its displacement in the operative movement of the handle 14.

The wave producing members may be of any desired configuration designed to produce the particular wave or configuration thereof sought. In the present instance these plates are of substantially corrugated cross section and comprise the upper plate 20 and the lower plate 21. This upper plate may be detachably connected with the clamping member in any desired manner, for instance by means of the bayonet slots 22 in the clamping member 12 adapted to receive the headed pins 23 upon the plate 20. The lower wave member 21 is removably supported upon the heating unit by means of a tubular portion 24 which is provided with a longitudinal slot or opening 25 so as to yieldingly engage the member 10 and be frictionally retained thereon. This tubular member is suitably secured, as by riveting to the plate 26 which is connected with the lower wave plate 21 in any desired manner, for instance by an overturned edge as at 27. The lower plate thus forms a series of chambers which are heated by con-

duction from the element 10 which may be controlled in any desired manner, for instance by means of an electrical heating connection as indicated at 28.

5 This plate 26 is held against lateral or circumferential movement upon the tubular supporting member by means of a slot 29 at one end thereof which engages a rib or spline 30 upon the heated member 10 as shown in
10 Figure 7, while the bayonet joint connection of the upper heating plate prevents any relative movement thereof upon the clamping member. The modified form of wave plate shown in Figure 3 is designed to pro-
15 duce a wave of the hair as indicated at 31 in Figure 4, this being technically known as a "long" or "sea" wave, while the form of wave shown in the form of the invention in Figure 2 is of shorter length for producing
20 a soft wave as indicated at 32. The construction of the plates used in both forms is similar to that above described, the only difference being in the configuration of the plates.

25 It is desirable in the operation of waving the hair to first moisten the same and for the purpose of drying the hair during the waving operation and permitting the escape of moisture from between the plates either
30 or both thereof may be provided with perforations or other apertures. In the illustration herein the upper plate 20 is formed with a series of apertures 33 and the lower plate may be similarly apertured if found
35 desirable. The side edges of this upper plate are also preferably overturned as at 34 to prevent the presentation of a sharp edge against the hair in the waving operation, particularly when the device is turned
40 in different positions.

The operation of the invention will be apparent from the foregoing description from which it will be seen that the waving plates or members are detachably and inter-
45 changeably mounted so that plates of different conformations may be used to produce any desired wave and quickly and readily applied to the heating and clamping mem-
50 bers, while in the use of such plates the function of drying the hair is also secured. By the removal of the plates from the curling iron the latter may be used in the ordinary manner for curling the hair so that the in-
55 vention combines in a single structure means for curling, waving and drying the hair. The arrangement of the plates produces a number of waves at each operation, thus reducing the time necessary for that purpose and the heating means is so disposed rela-
60 tive to the plates as to prevent overheating or burning of the hair while the entire device is of a simple and economically constructed form adapted to accomplish the most effi-
65 cient results.

While the specific construction of the wave

plates and the manner of their detachable mounting has been shown and described, still the invention is not confined thereto as changes and alterations may be made thereto without departing from the spirit
70 thereof as recited in the following claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A hair waver attachment for cooper- 75 ating heating and clamping members comprising supplemental wave members removably mounted upon each of said heating and clamping members.

2. A hair waver attachment for cooperat- 80 ing heating and clamping members comprising supplemental detachably mounted wave producing plates applicable to said members and longitudinally removable therefrom.

3. A hair waver comprising cooperating 85 heating and clamping members provided with detachably mounted plates conformed to produce a wave in the hair and longitudinally removable from said members, one of said plates being provided with apertures
90 to permit the escape of moisture from the hair disposed between the plates.

4. In a hair waver, a heating member, a clamping member cooperating therewith, a substantially corrugated wave plate sup- 95 ported upon the heating member, and a cooperating wave plate detachably supported upon the clamping member.

5. In a hair waver, a heating member, a clamping member pivoted thereon, a sub- 100 stantially corrugated wave plate supported upon the heating member, and a cooperating wave plate detachably supported upon the clamping member by means of a pin and slot connection therewith. 105

6. In a hair waver, a heating member, a cooperating clamping member pivoted there- 110 to, a lower wave plate provided with a tubular friction clamping member to embrace said heating member, and a cooperating upper wave plate carried by the clamping member.

7. In a hair waver, a heating member, a cooperating clamping member pivoted thereto, a lower wave plate provided with a 115 tubular friction clamping member to embrace said heating member, and a cooperating upper wave plate carried by the clamping member, said tubular member being provided with interlocking means with the heating member to prevent circumferential movement thereon. 120

8. In a hair waver, a heating member, a cooperating clamping member pivoted thereon, a base plate provided with a tubu- 125 lar split sleeve adapted to frictionally engage said heating member, and a cooperating wave plate carried by the clamping member.

9. In a hair waver, a heating member, 130

a cooperating clamping member pivoted thereon, a base plate provided with a tubular split sleeve adapted to frictionally engage said heating member, and a cooperating wave plate carried by the clamping member, said sleeve being provided with a slot to engage a key upon said heating member.

10. In a hair waver and drier, a heated member, a base plate carried thereby, and a cooperating wave plate provided with apertures to permit the escape of moisture from the hair disposed between the plates.

11. In a hair waver, a heating member, a clamping member pivoted thereon, a base plate, a lower wave plate secured at its edges to said base, a tubular split sleeve disposed between the base and wave plates and secured to the former, and an upper wave plate having a pin and bayonet slot connection with said clamping member.

12. In a hair curling device, a handle provided with a heating member and a straight shank portion, a clamping member to engage said heating member and pivoted upon said shank, a tension spring disposed between said clamping member and shank with extended contact upon the latter, and

a bracing clamp disposed over the contacting portion of said spring and secured at the pivot of the clamping member.

13. A hair waving attachment for curling irons of the hinged rod and jaw type comprising a pair of mating elements having means for detachable engagement with the rod and jaw respectively so that said elements contact therewith and with each other when the jaw is closed against said rod.

14. As a new article of manufacture, a hair waver for curling irons comprising a pair of fluted elements having means for detachable connection with a curling iron so as to relate said elements with respect to each other and permit same to be brought into impingement with a strand of hair to wave same when the elements are subjected to the heat of the iron.

15. A hair waving attachment for curling irons comprising a pair of mating elements having means for detachable engagement with the coacting parts of the iron, said elements being fluted to nest together when said parts of the iron are closed relatively.

In testimony whereof I affix my signature.

ANDERS L. BERTHELSEN.