T. C. RUSSELL.

HAIR MARCELING APPARATUS.

APPLICATION FILED JUNE 22, 1921.

1,397,332. Patented Nov. 15, 1921.

Fig. 1.

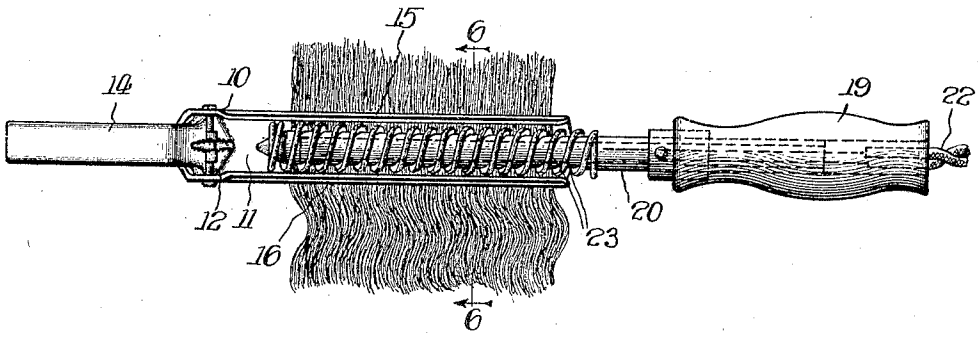



Fig. 2.

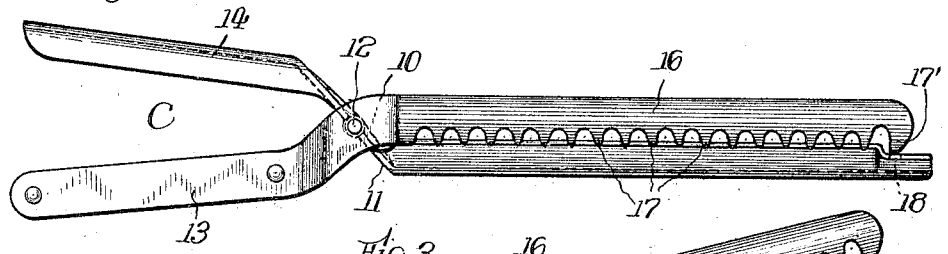



Fig. 3.

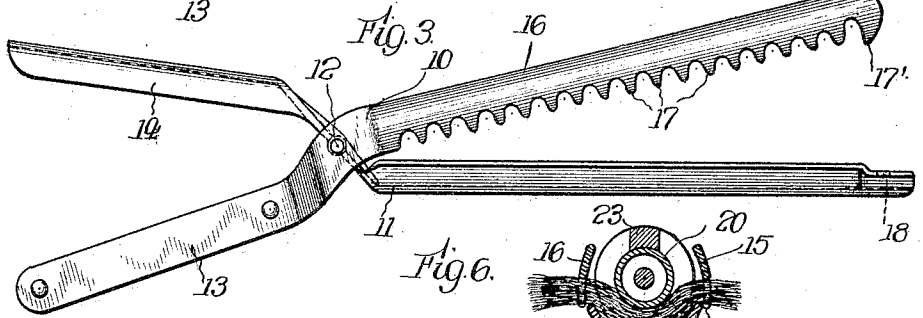



Fig. 6.




Fig. 4.

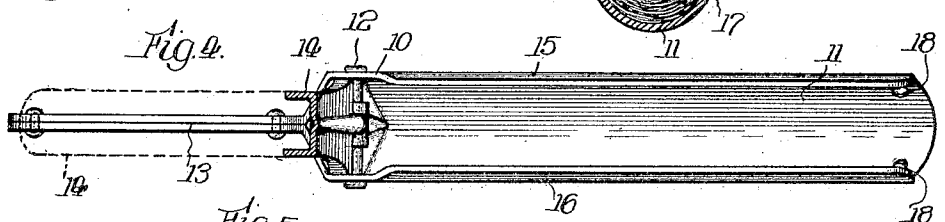
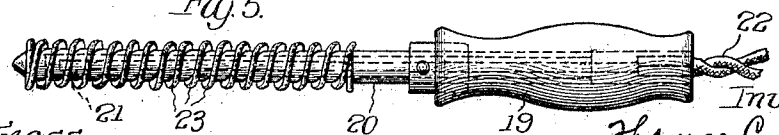



Fig. 5.




Witness:
A. J. Sauser.

Inventor:
Thomas C. Russell
By Charles J. Schmidt Atty.

# UNITED STATES PATENT OFFICE.

THOMAS C. RUSSELL, OF CHICAGO, ILLINOIS.

## HAIR-MARCELING APPARATUS.

1,397,332. Specification of Letters Patent. Patented Nov. 15, 1921.

Application filed June 22, 1921. Serial No. 479,522.

*To all whom it may concern:*

Be it known that I, THOMAS C. RUSSELL, a citizen of the United States, and a resident of Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Hair-Marceling Apparatus, of which the following is a specification.

My invention relates to hair marceling apparatus and covers various features of improvement in construction, arrangement and operation.

In devices of this class as heretofore constructed the hair clamping and the heating elements all form part of a unitary structure which is very cumbersome and can be operated only with difficulty and discomfort by unskilled persons. The main object of my invention is to provide marceling apparatus in which the clamping member or tool, and the heating member are separate devices but adapted to be efficiently brought together to perform marceling operation. This arrangement leaves the clamping frame light and free and to be readily and easily applied to the hair and the hair arranged ready for heating. This clamping frame after adjustment is then held with the one hand and with the other hand the heated element is applied, the heated element being provided with corrugations or fins for engaging with the hair arranged in the clamping member so that after relative shift of the members and heating of the hair the Marcel waves will be produced.

Another important feature of my arrangement is that the clamping frame, being free of the heating element, is cool and can be applied to the hair with greater comfort and safety. To afford a greater degree of protection against heat, one of the jaws of my improved clamping member is in the form of a shield or spoon which forms a support for the hair and for the application of the heating member thereto but which stays sufficiently cool to prevent burning of the user's head.

The above and other features of my invention are incorporated in a marceling apparatus shown on the accompanying drawing. On the drawing—

Figure 1 is a plan view showing the clamping member and heating member in coöperation to marcel hair,

Fig. 2 is a side elevational view of the clamping member when closed,

Fig. 3 is a side elevational view of the clamping member showing it in open position,

Fig. 4 is a plan view of the clamping member with one of the handles broken away,

Fig. 5 is a plan view of the heating member, and

Fig. 6 is an enlarged sectional view on plane 6—6, Fig. 1.

The clamping member by means of which the hair is first arranged ready for the marceling heating operation is designated as a whole C. It comprises upper and lower jaw members 10 and 11 hinged together at 12 and having the handle parts 13 and 14. The upper jaw member in front of its pivot point is bifurcated to form the parallel arms or combs 15 and 16 having the teeth 17 along their lower edges. The lower jaw member in front of its pivot point is solid and of concavo-convex transverse cross section as clearly shown in Fig. 6. When the clamping member is closed as shown in Fig. 2 the points of the teeth extend alongside of the edges of the lower jaw member to form closed spaces in which the hair to be marceled is uniformly distributed and held ready for the marceling operation. The clamping member is opened by separating the handles 13 and 14 and is closed by bringing these handles together. To limit the closure movement of the jaw members and to hold them in proper relative position for the marceling operation the lower jaw member at its front end has holes 18 for receiving the end teeth 17′ which are made a trifle longer than the other teeth. When these teeth engage in the holes the jaw members will be held rigidly in proper alinement as shown in Fig. 2.

The heating member comprises a handle part 19 from which extends the metallic tube 20 within which is disposed a heating element 21 adapted to be connected by conductors 22 with a source of electricity. In order to form hair engaging corrugations or fins I preferably apply a helical member 23 on the tube 20, this helical member being formed of a metallic band of rectangular cross section. The heating member can be heated electrically as shown or it can be heated by being held over a flame. The heating member fits the concave side of the lower jaw member and between the comb arms of the upper jaw member, the radius of curvature of the lower jaw member being preferably equal to the radius of curva-

ture of the helical member 23. Preferably the comb arms are also curved transversely so that when the heating member is applied the jaw members will intimately surround it to thoroughly apply the heat to the hair.

To use the apparatus the clamping frame is first opened and the lower jaw member 11 inserted below the section of hair to be marceled. The clamping member is then closed to the position indicated in Fig. 2 after the hair has been arranged therein to be uniformly distributed between the comb teeth. The hot heating member is then laid in the closed jaw members and shifted in one direction or the other depending upon the direction in which it is desired to wave the hair at that point. After sufficient application of heat the heating member is withdrawn and the hair will be waved. The jaw member is now opened and released from the hair and inserted in place to form the next wave which will be in the opposite direction. After closure of the clamping structure the heating member is again applied but shifted in the opposite direction. The proper Marcel wave effect is thus accurately given to the hair.

The clamping member is very light and can therefore be readily manipulated to prepare the hair for marceling and can be very readily held in the one hand while the heating member is applied with the other hand. As the solid lower jaw member and the comb arms surround the heating member it is impossible for the heating member to come into direct contact with the head and burning is prevented. The clamping member never becomes hot enough to burn and can therefore be manipulated with comfort to receive and prepare the hair for marceling. By turning the heating element back and forth a number of times after application against the hair in the clamping member the hair will readily distribute itself between the turns of the helix 23 so that the hair will readily follow to form the desired wave form when the heating member is shifted.

I do not desire to be limited to the exact construction, arrangement and operation shown and described as changes may be made which would still come within the scope of the invention.

I claim as follows:

1. In marceling apparatus, the combination of a clamping structure and a heating structure, said structures being entirely separable, said clamping structure comprising upper and lower jaw members hinged together at one end, said lower jaw member being in the form of a plate, the upper jaw member comprising two side arms having teeth at their lower edges for coöperating with the lower jaw arm to form hair inclosing passageways when said jaw members are brought together, said heating structure having a heating end adapted to be applied on said lower jaw member and between said comb sides to heat the hair distributed on said lower jaw member by said comb teeth.

2. In marceling apparatus, the combination of a clamping structure and a heating structure, said clamping structure comprising upper and lower jaw members hinged together, the outer end of the lower jaw member being trough shaped, the upper jaw member at its outer end comprising two comb arms at right angles with the lower jaw member and having teeth for coöperating with the lower jaw member to form hair holding passageways, said heating structure having a cylindrical heating end adapted to fit said trough shaped lower jaw member and between said comb arms to engage with and heat hair arranged on said clamping structure.

3. In hair marceling apparatus, the combination of a clamping structure and a heating structure, said clamping structure comprising upper and lower jaw members hinged together, the lower jaw member in front of the hinge point being of concavo-convex transverse cross section, the upper jaw member in front of the hinge point comprising side arms having teeth in their lower edges, said side arms coöperating with the lower jaw member to form a receiving trough for the heating structure when said clamping structure is closed, said teeth cooperating with the lower jaw frame to form passageways for holding the hair on said lower jaw member, said heating structure having a cylindrical heating end to be applied in said closed clamping structure to impart heat to the hair held therein.

4. In marceling apparatus, the combination of a clamping structure and a heating structure, said clamping structure comprising upper and lower jaw members hinged together and provided with handles whereby they may be opened or closed, said upper jaw member comprising parallel arms extending in vertical planes and having teeth along their lower edges, the lower jaw member being in the form of an imperforate plate adapted to engage between the lower edges of said arms to form a trough therewith and to coöperate with the teeth to form passageways for holding hair in position on said lower jaw member when said jaw members are closed, said heating structure comprising a cylindrical heating member and corrugations thereon adapted to be applied in the closed jaw members of the clamping structure to receive and impart heat to the hair held by said clamping structure.

5. In marceling apparatus, the combination of a clamping structure and a heating structure, said clamping structure comprising upper and lower jaws hinged together,

said lower jaw member being of concavo-convex cross section, said upper jaw member comprising sides curved transversely to form continuation of the lower jaw member when the jaw members are closed, said jaw members when closed forming a substantially semi-cylindrical trough for receiving the heating element, teeth along the lower edges of the side members of the upper jaw member coöperating with the lower jaw member to form hair retaining passageways, said heating structure comprising a cylindrical heating member and heat conducting wings thereon, said heating structure being adapted to be applied in the trough formed by said clamping structure to receive and impart heat to the hair clamped thereby.

6. In marceling apparatus, the combination of a clamping structure and a heating structure, the clamping structure comprising two jaw members hinged together, the lower jaw member being in the form of an imperforated plate, the upper jaw member comprising two side arms having teeth along their lower edges for coöperating with the lower jaw member to form hair retaining passageways when the jaw members are closed, said heating structure comprising a cylindrical heating end, a helix mounted on said cylindrical end and having a pitch equal to the pitch of the teeth on the clamping structure, said heating structure when applied in said clamping structure receiving the hair between the helix turns and imparting heat thereto.

7. A hair clamping device for marceling apparatus comprising upper and lower jaw members hinged together, said members when closed forming a substantially semi-cylindrical trough, one of said members having teeth forming passageways for distributing hair transversely across the lower jaw member, said lower jaw member being imperforate thereby to form a shield to prevent burning of the head.

8. A clamping structure for marceling apparatus comprising upper and lower jaw members hinged at one end, the lower jaw member being imperforate, the upper jaw member comprising side arms having teeth along their lower edges for coöperating with the edges of the lower jaw member to form hair holding passageways, said jaw members when closed forming a trough for the reception of a heating member, and means for limiting the closure movement of said jaw members.

9. A clamping structure for marceling apparatus comprising upper and lawer jaw members hinged together, the lower jaw member being in the form of an imperforate plate adapted to be slipped under the hair to be marceled, the upper jaw member comprising arms having teeth along their lower edges, said arms forming continuation of said lower jaw member and said teeth forming passageways for holding hair in marceling position when the jaw members are closed, holes in said lower jaw member, and abutments on the upper jaw member arms for engaging in said holes to lock the jaw members in closed position.

10. In marceling apparatus, the combination of a hair clamping structure and a heating structure, said clamping structure comprising upper and lower jaw members hinged together at one end, said lower jaw member being in the form of an imperforate plate, the upper jaw member comprising side arms having teeth along their lower edges for coöperating with the edges of the lower jaw member to form hair distributing passageways, said lower jaw member and said arms being transversely curved to form a substantially semi-cylindrical trough when the jaw members are closed, said heating structure comprising a cylindrical heating member and a hair receiving and heat distributing member thereon in the form of a helix, the diameter of said helix being substantially the same as the diameter of the trough formed by the closed clamping structure whereby said heating structure may be applied in said clamping structure to intimately engage with and impart heat to the hair to be marceled.

In witness whereof, I hereunto subscribe my name this 18th day of June A. D., 1921.

THOMAS C. RUSSELL.