W. A. ROSS.

HAIR SINGEING MACHINE.

APPLICATION FILED MAY 25, 1920.

1,378,137. Patented May 17, 1921.

Fig. 1

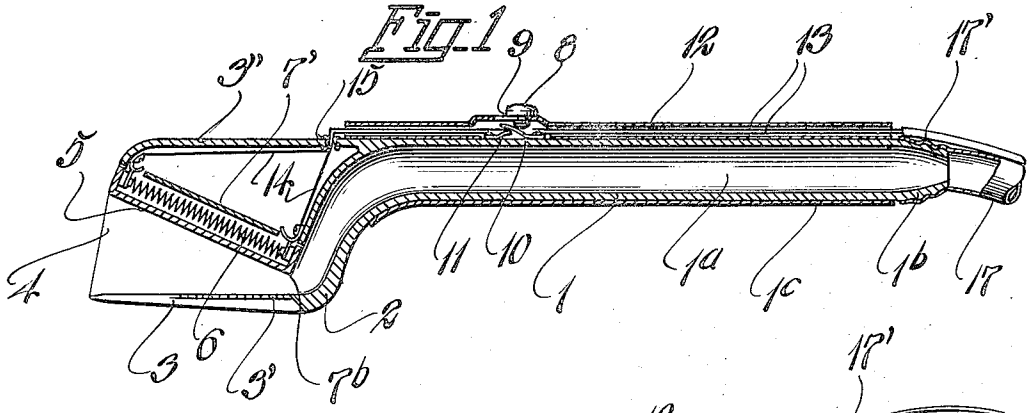


Fig. 2

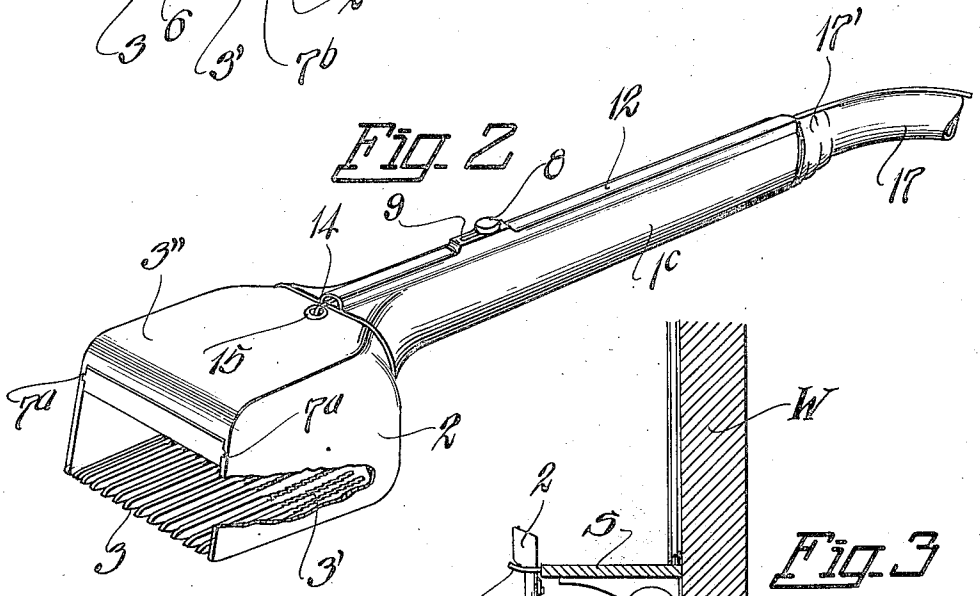


Fig. 3

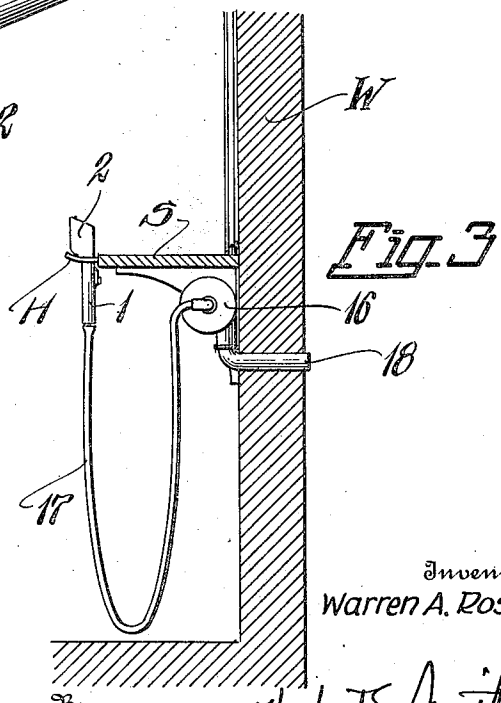
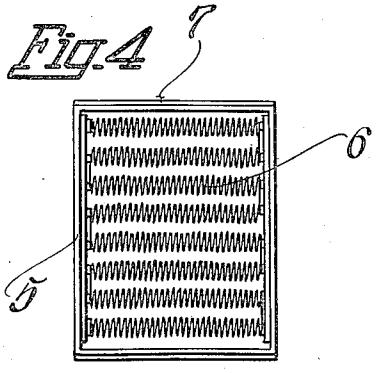


Fig. 4



Inventor

Warren A. Ross

By Herbert E. Smith

Attorney

UNITED STATES PATENT OFFICE.

WARREN A. ROSS, OF HAVERHILL, MASSACHUSETTS.

HAIR-SINGEING MACHINE.

1,378,137. Specification of Letters Patent. Patented May 17, 1921.

Application filed May 25, 1920. Serial No. 384,233.

To all whom it may concern:

Be it known that I, WARREN A. ROSS, a citizen of Canada, subject to King of Great Britain, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Hair-Singeing Machines, of which the following is a specification.

The present invention relates to an improved hair singeing machine designed particularly for tonsorial use as a substitute for the usual hair clipping device or machine used by barbers and others in trimming a person's hair. To this end the envention contemplates an electrically heated device including a comb as one of its features, whereby the instrument is so manipulated with relation to the ends of the hair that the hair ends may be burned or singed off instead of cut off as by shears, thus closing the trimmed hair ends to seal them against loss of vitality. In connection with the trimming feature of the device I utilize means for disposing of the hair ends and also for carrying off odors that may arise from the singeing of the hair, as will be hereinafter pointed out.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have thus far devised for the practical application of the principles of my invention.

Figure 1 is a longitudinal sectional view of the device or tonsorial instrument, embodying my invention.

Fig. 2 is a perspective view of the instrument, partly broken away for convenience of illustration.

Fig. 3 is a view showing the device, and its connections, suspended from a support, and out of use.

Fig. 4 is a detail plan view of the electric heating device of the instrument.

The instrument of the invention is of convenient size to be manipulated single-handed in manner similar to the handling of a pair of hair clippers, and in general appearance is somewhat of the same appearance as a pair of clippers, as shown in the preferred form of my invention in Fig. 2 of the drawings.

In the construction of the instrument the handle 1 is tubular and of sufficient length to permit grasping in the hand for use, the interior of the handle forming a cylindrical passage 1^a throughout its length, which terminates at the rear end in a reduced extension 1^b preferably having exterior ribs or corrugations.

The instrument is composed essentially of a single cast piece of metal that may be highly polished for ornamentation, and if desired may be equipped with a sleeve 1^c covering the handle and affording convenient and comfortable means for holding the device in the hand while manipulating it.

The forward end of the instrument is provided with an enlarged hollow head 2 of general rectangular formation and preferably fashioned with a bottom portion constituting a comb 3, the tines of the comb being adapted to engage the hairs of the head and being presented thereto in manner similar to the application of a hair clipper. On their upper faces and near the rear, the tines are preferably provided with teeth or corrugations 3′ designed to assist in detaching the singed hair ends from the hairs after singeing as will be described. The upper portion of the head is closed by a top plate 3″ and the head is fashioned with an open front 4, for the proper functioning of the device, and to receive the heating device, indicated as a whole by the number 5 as an electric heating apparatus. The heating device 5 is fashioned as an open top metal tray adapted to receive a series of electric heating coils 6, and provided with lateral tongues or ribs 7 to slide in the complementary grooves 7^a provided on the inner surface of the side walls of the head 2. Preferably these grooves decline from front to rear of the head in order that the heating device may be arranged in the oblique position in the head indicated in Fig. 1 to provide an open space 4 at the front and a restricted, transverse throat 7^b at the rear which affords communication between the open head 4 and the tubular handle 1 for the conveyance of singed hair ends and odors from the singeing of the hair.

The tray 5 is removable from the head when required and may be held in operative position by frictional contact, or by other means, and preferably a top plate 7′, extending transversely of the head, is provided for the tray and its inclosed coils 6.

The electric heating device is controlled by or from the button or knob 8, conveniently located on the tubular handle and slidable in the guide slot 9, and the knob or

button is designed to control the electric switch comprising the two contact points or members 10 and 11 disposed within the channel inclosed by the wall 12 to accommodate the electric conducting wires 13 which are included in an electric circuit for heating the coils 6. From the switch, the wires 14 pass through the channel 12 and out through its open end and thence through an opening 15 in the top plate 3 of the head and are attached to proper terminals of the heating device.

For drawing off from the head, the singed hair ends and accompanying odors, I employ a suction fan 16 which may be electrically operated in connection with the switch 8, drawing the hairs and odors through a flexible tube 17 connected at 17' to the reduced end 1^b of the device as in Figs. 1 and 2, and from the fan the hairs and odor are impelled through a discharge pipe 18 in the wall W or other support in Fig. 3. When not in use the instrument may be suspended from the hook H on the shelf S, and detachably supported thereon, or other convenient means may be employed for temporarily holding the instrument in order that it may be readily accessible when needed.

In the utilization of the instrument, the manipulation is quite similar to the use of a pair of hair clippers. The comb portion of the head is passed through the hair of the patient, extending the hairs and causing their ends to engage the front portion of the obliquely disposed tray 5 and the contact of the hair ends with the heated plate or tray results in singeing or burning the hair ends. As the movement of the instrument is continued the advance of the heater 5 gradually shortens the hair by singeing, and successive hairs are engaged by the obliquely disposed tray which rides over their ends, the singed ends falling in the rear of the open head and gathered by the corrugated surfaces of the tines of the comb. The suction of air through the open head and tubular handle draws the singed hair ends and odors through the throat 7^b, through the discharge tube 1^a of the handle, and passing through the flexible tube 17 and fan casing 16 the hair and odors are impelled through the discharge pipe 18 to a suitable receptacle or to the atmosphere.

The electric conducting parts of the instrument are properly insulated to prevent short circuiting of the current and to restrict the heat to the heating device 5 in the open head, and the current to the electric heater and motor for the fan 16 are properly controlled from the switch button 8 as described.

Thus by the utilization of the singeing device the hairs are shortened or trimmed as desired in manner similar to the usual cutting operation, with the advantages accruing from the conveying and disposition of the trimmed hair ends as well as of the odors arising from the singeing of the hair, and the ends of the trimmed hairs are sealed by the singeing operation to prevent loss of vitality. Another feature of the instrument is the "lofting" of the hairs caused by the suction of air through the head and throat, supplementing the action of the comb tines in lifting the hairs so that their ends will contact with the face of the heated plate or tray 5. As the plate 5 rides over the ends of the hairs and the hairs are gradually shortened by singeing as they approach the rear of the head, the charred hairs are pulled toward the throat and after the singed hairs leave the plate the teeth 3' at the rear of the comb tines gather the charred ends and insure their separation from the hairs.

From the above description taken in connection with my drawings it is evident that I have provided a device that may be manipulated with facility and dexterity, and which is highly proficient in performing its required functions in a satisfactory manner.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination with a tubular handle and hollow open front head having tines in its bottom forming a comb, of a singeing device in said head for the purpose described, and means for conveying charred hairs through said head and handle.

2. The combination with the tubular handle and enlarged, hollow head formed with a comb, of a singeing device in said head, and means for providing pneumatic suction for conveying charred hairs and odors therefrom through said head and handle.

3. The combination with the tubular handle and hollow open front head having comb tines forming a part of its bottom portion, said tines at the rear having teeth on their upper faces, a singeing device in the head, and means for conveying charred hairs through said head and handle.

4. The combination with the tubular handle and hollow, open front head having comb-tines forming part of its bottom portion, said tines at the rear having teeth on their upper faces, and means for providing pneumatic suction through said head and handle for conveying charred hairs and odors therethrough.

5. A tonsorial instrument comprising a tubular handle and hollow head, a singeing device in said head, and means for conveying charred hairs through said head and handle for the purpose described.

6. A tonsorial implement comprising a hollow head, a singeing device in said head and means for conveying charred hairs from said head.

7. In a device as described the combination with a hollow head, a singeing device in said head, and means for "lofting" hairs to be engaged by said singeing device.

8. A tonsorial instrument comprising a tubular handle and head, a singeing device in said head, and means for lofting hair within the head to engage said device and for subsequently removing charred hair ends from the head.

9. The combination in a device as described, with its hollow head, of a removable singeing device in said head, and means for guiding the hair to be singed to said singeing device.

10. The combination in a device as described with its hollow head having grooves in its lateral walls, of a singeing device having guide ribs to engage said grooves, and means for guiding the hair to be singed to said singeing device.

In testimony whereof I affix my signature.

WARREN A. ROSS.