March 1, 1932. N. F. DAHL 1,847,522

COMBINATION SHIELD

Filed June 11, 1928

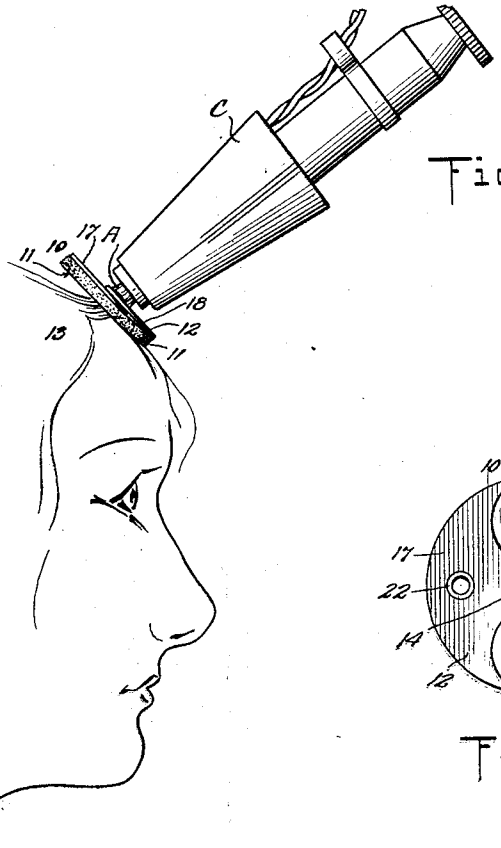


Fig. 1.

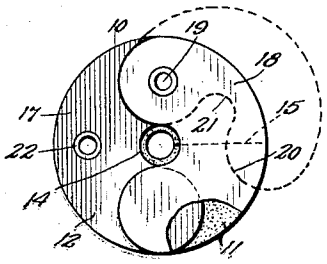


Fig. 2.

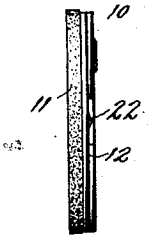


Fig. 4.

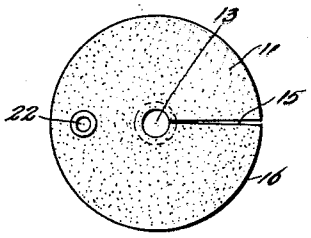


Fig. 3.

INVENTOR
NORMAN F. DAHL
BY
Warren S. Orton
ATTORNEY

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UNITED STATES PATENT OFFICE

NORMAN F. DAHL, OF BROOKLYN, NEW YORK, ASSIGNOR TO KEEN WAVING COMPANY, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

COMBINATION SHIELD

Application filed June 11, 1928. Serial No. 284,650.

The invention relates in general to a protective shield for use in the art of permanent hair waving. Devices of this character are designed to be disposed between the head of the person under treatment and the usual electric heater for protecting the person's head from the effects of heat radiated from the heater and from hot water and steam which may leak back from the wetted portion of the strand of hair contained in the heater.

It is a usual practice in this art at present to position some kind of a protective device between the heater and the person's head and this is usually a wad of cotton, or a layer of felt or some other form of water absorbing material. It has also been known to use some kind of protective device, usually a layer of insulation to prevent the heater from heating the head of the person. These different devices have heretofore been sold and inserted into position separately and without regard to their possible cooperation in producing protection to the head under treatment. As the available space between the head and the adjacent end of the heater is usually quite small, the busy operator experiences considerable difficulty in arranging the parts compactly and even in assembling them at all. In rapidly manipulating the protective devices into position, especially when a soft flexible water absorbent sheet is used, there is very apt to develop a wrinkling or distortion of the water absorbent pad with the result that a leakage therethrough permits the hot fumes or liquid to reach the head with resulting discomfort.

The primary object of the invention is to provide a simplified, unitary article for protecting the head, which article can be manipulated as a single unit easily and quickly set in position and which, when in position will tend to defeat the formation of accidental leaks therethrough even though the fluid absorbent element be made of readily flexed, soft material such as the felt commonly used for head protectors in this art.

Broadly, I attain this object by utilizing the known form of stiff heat insulating fibre or any of the usual insulating materials now in general use disposed to function as usual in such locations but assembled fixed to the soft, water-absorbent felt in such a way as will provide a stiffening backing for the felt thus minimizing accidental wrinkling and incidentally insuring the proper locating of the soft material shield in snug, watertight engagament with the portion of the hair strand which it encircles.

Various other objects and advantages of the invention will be in part obvious from an inspection of the accompanying drawings and in part will be more fully set forth in the following particular description of one form of mechanism embodying my invention, and the invention also consists in certain new and novel features of construction and combination of parts hereinafter set forth and claimed.

In the accompanying drawings:

Figure 1 is a view illustrating the relative position of the apparatus used in permanently waving a strand of hair, with a shield constituting a preferred embodiment of the invention positioned in engagement with the portion of the hair strand adjacent the head;

Figure 2 is a plan view of one side of the shield shown in side elevation in Figure 1 with the fibre reinforcing and heat insulating element in collapsed position and with parts broken away to show internal construction of the fibre disc also shown in open position in dotted outline;

Figure 3 is a plan view of the underside of the shield shown in the preceding figures and constituting the reversed side of the showing in Figure 2; and

Figure 4 is an edge view in side elevation of the shield shown in the preceding figures.

Referring to the drawings and particularly to the showing in Fig. 1 there is shown a strand of hair A, extending from the head B, the part thereof under treatment contained in the electric heater C following conventional practices in this respect. Positioned between the head B and the adjacent end of the heater C and encircling the hair strand close to the head is a shield 10 constituting a preferred embodiment of the invention.

The shield comprises, when in closed, oper-

ative position, two flat circular members, 11 and 12 provided centrally thereof with aligned apertures 13 and 14 designed to receive the thick portion of the hair strand A adjacent the head. One of the members 11, herein after referred to as a disk is designed so as to face and preferably contact with the head B and in the illustrated instance is formed of a soft, flexible water absorbent material preferably a form of porous felt commonly used in the hair waving art. The disc is provided with a radially extending slit 15 connecting the aperture 13 with the outer edge 16 and thus permitting the insertion of the strand A laterally into the central aperture 13.

The member 12 hereinafter referred to as an insulator or backing member is formed of two sections 17 and 18, each part being substantially semi-circular in plan, or more accurately described of a kidney shape, particularly shown in dotted outline in Fig. 2. The parts are pivotally connected by means of an eye fastener 19 so that the parts can be readily shifted from the full line into the dotted line position shown in Fig. 2 to permit the insertion of the hair strand into the aperture 14. This aperture is formed by recessing each of the diametrical edges 20 of the sections 17 and 18 so as to provide a reentrant recess 21, the recesses coacting when the parts are in the collapsed or closed position shown in full lines in Fig. 2 to form the circular aperture 14 and which in the instant case has a diameter slightly greater than the diameter of the aperture 13 in the felt disc.

The two parts forming the insulator 12 are made of a relatively stiff cardboard having insulating properties and preferably formed of the fibrous material or of the usual insulating materials at present in general use in this art to insulate the heaters from the head of the person under treatment. The relatively fixed half-section 17 of this insulator is permanently secured to the felt disc 11 by means of an eye fastener 22 passed therethrough preferably in radial alignment with the slit 15 as particularly shown in Fig. 3.

In operation it is understood that the movable section 18 is swung about its pivot at 19 and shifted into the open position shown in Fig. 2 which exposes slit 15. The shield as a whole is shifted laterally onto the hair coil A, the hair being passed through the slit 15 and into the recess 13. The section 18 is then moved into closed position overlapping the entrance slot 15 as shown in full lines in Fig. 2. After positioning the protective device, the heater is inserted in position usually with the heater further advanced than is shown in Fig. 1 and engaging the fibre side 12 in order to bring the heat as close as possible to the base of the hair strand.

By means of the compound shield herein disclosed it is possible with one operation to locate properly both a soft pad in engagement with the head and a heat insulator between the pad and the heater and this can be done even though there is but limited space between the head and the heater. As both members are applied at the same time there has been avoided the messy manipulating of these parts usual when the parts were separate especially when wet. As the stiff fibre insulating member engages the soft felt pad over its entire area there is provided a reinforcing or stiffening of the soft pad which reduces the possibility of wrinkling and further, the edges of the fibre insulator when in closed position prevent the tearing or mutilating of the flexible edges of the felt. As the movable half of the felt insulator covers the entrance slit in the felt pad, possibility of leakage through the slit is avoided.

I claim:

1. A protective device for use in the art of permanent hair waving to protect the head of the person under treatment from the effects of heat radiated from the heater and from any accidental drip of hot water from the strand of hair under treatment in the heater, said device constituting an article of manufacture adapted to be quickly disposed in position encircling the portion of the hair strand between the heater and head, comprising a single, one piece integral layer of soft, flexible water absorbing material disposed in position facing the head, having a central aperture and split therefrom to an outer edge to receive the strand of hair under treatment and a two-part backing member with the two parts pivotally connected and adapted to receive therebetween the strand of hair under treatment, said backing member formed of a relatively stiff, heat-insulating material, with one of its parts secured to the flexible water absorbing layer to secure the entire layer to said part and said two parts tending to reinforce and keep the layer in a flat position.

2. A heat protecting shield for use in the art of permanent hair waving comprising two circular members of approximately the same diameter, disposed parallel to each other and having aligned apertures at their centers to receive the strand of hair under treatment and both split from their central apertures to their outer edges to permit the intrusion of the hair strand into the central apertures, said splits being circumferentially spaced from each other whereby the slit in one is covered by the other member when the members are in overlapping relation, means for securing the members permanently to each other, one of said members formed of a flexible felt and the other of a heat insulating, relatively stiff fibre, said fibre member being formed of two parts somewhat semi-circular in plan with their diametrical edges providing the split from its central aperture to the edge and said relatively stiff fibre member forming a back-

ing for the relatively flexible felt member when the two parts thereof are in closed position covering the felt member.

3. A head protecting shield for use in the art of permanent hair waving comprising two members disposed side by side and having aligned hair receiving apertures, one member constituting a flexible water absorbent pad and the other constituting a two-part heat insulating member with the parts pivotally connected, one of said parts secured to the flexible pad, and said flexible pad provided with a radial slit extending from its aperture to its outer edge, and positioned between the ends of the part secured to the pad whereby the portion of the pad provided with the slit is exposed when the parts of the heat insulating member are swung relative to each other about their pivotal connections into open position.

4. A head protecting shield for use in the art of permanent hair waving and adapted to encircle the portion of a strand of hair adjacent the head, said shield comprising a one piece felt disk and a two part backing member of heat insulating material eccentrically disposed means for pivotally connecting the two parts of the backing member and eccentrically disposed means for securing said member as a whole to the felt disk to maintain it in position.

Signed at New York in the county of New York and State of New York this 25th day of April A. D. 1928.

NORMAN F. DAHL.