

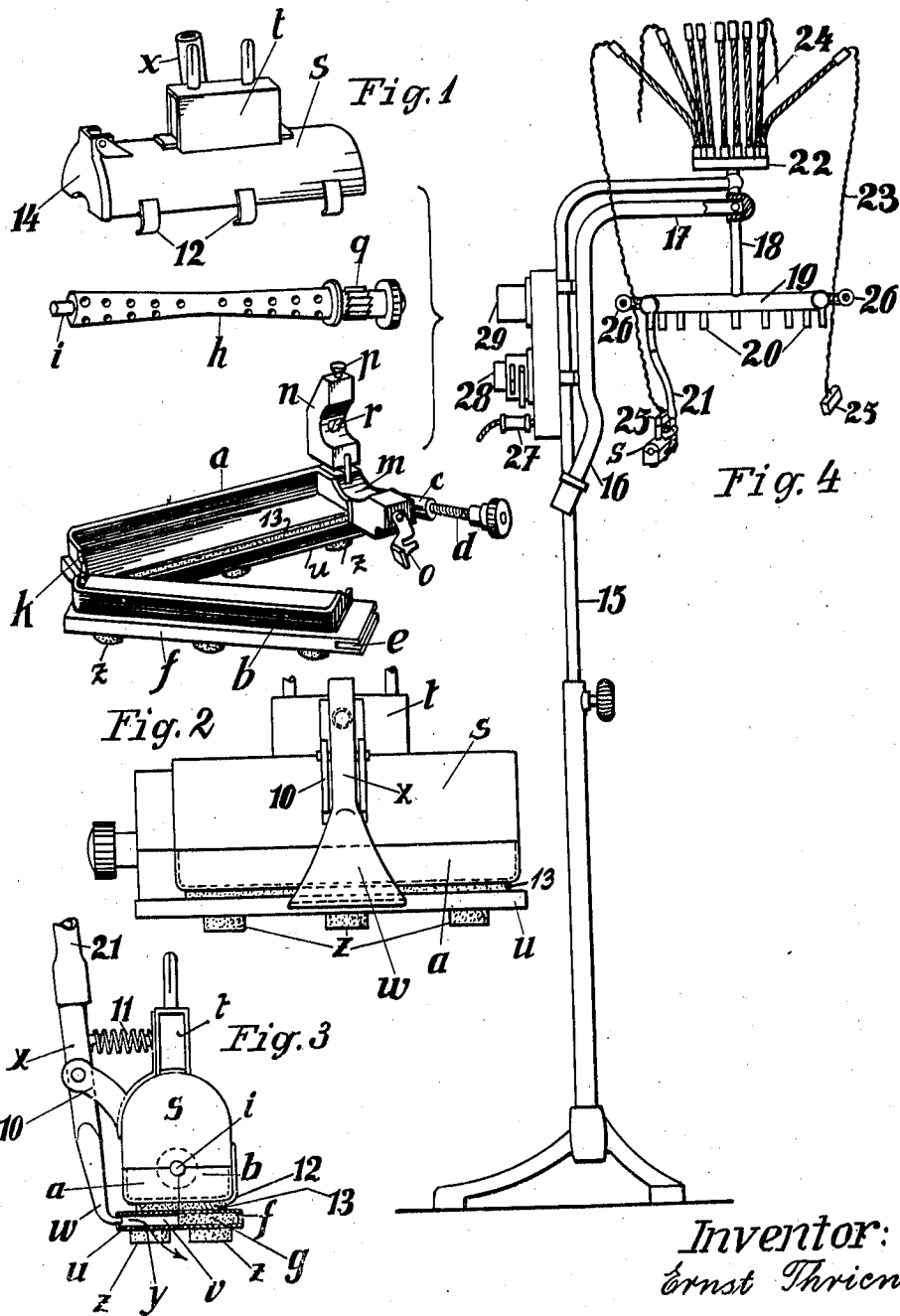
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HAIR UNDULATING APPARATUS

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UNITED STATES PATENT OFFICE

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HAIR UNDULATING APPARATUS

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My invention relates to hair undulating apparatus and more particularly to apparatus equipped with heating means. It is an object of my invention to provide an apparatus of this kind which is simple in construction and can be operated readily and efficiently.

It is another object of my invention to provide means for preventing radiation of the heat developed in the apparatus to the skin of the person whose hair is treated. To this end I provide means for setting up a flow of cooling air in the apparatus.

In the drawings affixed to this specification and forming part thereof an apparatus embodying my invention is illustrated diagrammatically by way of example.

In the drawings

Fig. 1 is a perspective illustration showing the three principal parts of the apparatus separately,

Fig. 2 is an elevation of the complete apparatus viewed from the left in Fig. 1,

Fig. 3 is an end elevation viewed from the right in Fig. 2,

Fig. 4 is an elevation of a stand from which a plurality of apparatus may be suspended.

Referring first to Fig. 1, the apparatus comprises a cover *s*, a base having two hinged parts *a*, *b*, and a shaft *h* for winding the hair which is inserted at the partition of the cover and the base.

The divided box-shaped base of the apparatus comprises the two parts *a* and *b* which are connected by a hinge at one end. Each part is provided with a base *f* and *u*, respectively, and an insulating layer 13 inserted between the part and the base. A heat insulating body *g* is inserted in the frame *f* of the part *b* as shown in Fig. 3. The frame *u* of the parts *a* defines a cavity *v* for a purpose which will be described. *c* is a threaded socket pivoted to the part *a* and provided with a screw spindle *d*, and *e* is a notch in the frame *f* which is adapted to receive the spindle *d*. It will be understood that by placing the spindle *d* in the notch *e* and screwing home the spindle the parts *a*, *b* will be connected as a unit. *z* are blocks of heat insulating material on the lower faces of the frames

f and *u*. The hair is wound on the shaft *h* which is journaled in the bearing *b* constituted by the parts *a*, *b* through the medium of a pin *i* at one end and in a bearing *m* of the part *a* at the other end. The bearing *m* is provided with a hinged cover *n* which is turned down on the body of the bearing *m* and retained by a hook *o* on the body *m* engaging a pin *p* on the cover *n*. In order to wind up the hair tightly, a ratchet wheel *q* is formed on the shaft *h* which cooperates with a ratchet tooth *r* in the cover *n*. The semi-cylindrical cover *s* is adapted to be placed on the parts *a*, *b* and to be held by catches 12 engaging below the part *b*. *t* is a casing at the top of the cover in which a heating resistance with suitable plug contacts is arranged.

When it is desired to cool the base *a*, *b* by air, as illustrated in Fig. 3, only the frame *f* of the part *b* is equipped with an insertion *g* of insulating material, the frame *u* defining a cavity *v* in which is inserted the flattened nozzle end *w* of a pipe *x* to which a rubber tube 21 is attached. Cooling air is discharged from the nozzle *w* and escapes through a slot *y* or suitable holes, not shown, in the base of the frame, flowing between the insulating blocks *z* and the skin.

10 is a bracket at the cover *s* in which the pipe *x* is adapted to rock, and 11 is a spring abutted against the casing *t* of the heating resistance and tending to hold the nozzle *w* in the cavity *v*.

To secure the parts in position, the pipe *x* is turned on its pivot in the bracket 10 against the pressure of the spring 11, the cover *s* is placed on the base *a*, *b*, so that the catches 12 engage the part *b* from below, and the pipe *x* is released so that its nozzle *w* by entering the cavity *v* of the frame *u* exerts a clamping action on the parts of the unit.

Preferably, one of the end walls of the cover *s* is hinged to the cover as indicated at 14 in Fig. 1 so as to permit the end of a hank which shall not be undulated to project from the cover at this end. Means as a spring catch, not shown, may be provided for holding the flap 14 in its open and closed positions.

The hair on the shaft h is nowhere in contact with the inner walls of the apparatus.

Referring now to Fig. 4, 15 is a stand having an air supply pipe 16 the horizontal upper reach 17 of which is connected with an annular pipe 19 by means of branch pipes 18. 20 are teats at the pipe 19 to which the rubber tubes 21 of the several apparatus may be connected.

22 is a table having a set of vertical coiled springs 24 from which contact sockets 25 are suspended by conductors 23. Preferably, each conductor 23 is guided over a pulley 26 at the annulus 19 which may be combined with clamping means, not shown, for the conductors. The sockets 25 are connected with the plug contacts on the resistance casings t of each apparatus.

Current is supplied to the upright 15 by means of a contact 27 on a switch board secured to the upright 15 and having a time switch 28 for interrupting the current after a given time, and a voltmeter 29.

Instead of inserting a nozzle w into the cavity v , I may provide a separate clamp one half of which comprises the cavity v .

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described for obvious modifications will occur to a person skilled in the art.

I claim:—

1. A hair undulating apparatus comprising a base having two parts adapted to receive a hank, a shaft for winding said hank rotatably carried in said base, a detachable cover, means at one side of said cover for securing it to said base, and an air supply pipe hinged to said cover at the opposite side and adapted to enter a cavity formed in said base.

2. A hair undulating apparatus comprising a base having two parts adapted to receive a hank, a shaft for winding said hank rotatably carried in said base, a detachable cover, means at one side of said cover for securing it to said base, an air supply pipe hinged to said cover at the opposite side and adapted to enter a cavity formed in said base, and resilient means for holding one end of said air pipe in said cavity.

3. A hair undulating apparatus comprising a base having two parts adapted to receive a hank, a shaft for winding said hank rotatably carried in said base, a detachable cover, means at one side of said cover for securing it to said base, an air supply pipe hinged to said cover at the opposite side, a nozzle at the end of said pipe adapted to enter a cavity formed in said base, and resilient means for holding said nozzle in said cavity.

4. A hair undulating apparatus comprising a base having two hinged parts adapted to engage the hair, one of said parts having a cooling chamber, means for applying cool-

ing air to said chamber, a rotatable shaft for winding the hair and a bearing for said shaft on the part having said cooling chamber.

In testimony whereof I affix my signature.

ERNST THRIENE.

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