(No Model.)

H. LYONS.

COMBINED HAT CONFORMATOR AND STRETCHER.

No. 447,751. Patented Mar. 3, 1891.

Fig. 1

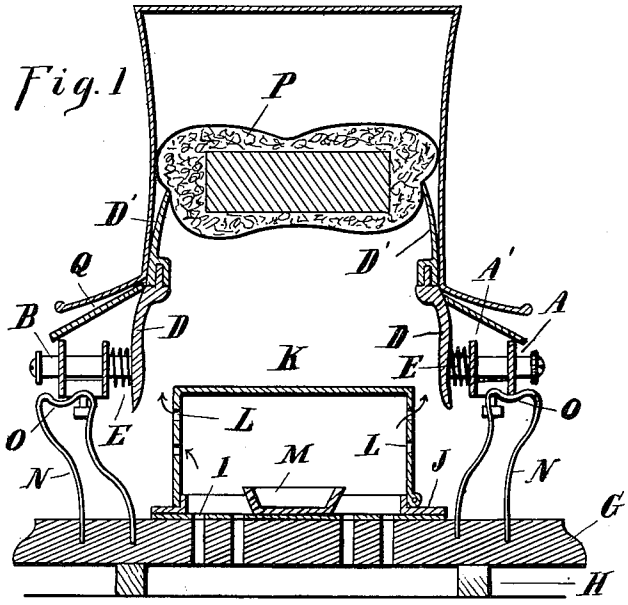


Fig. 3

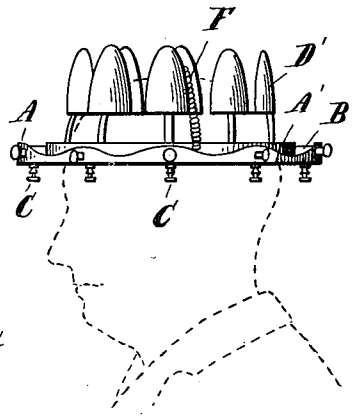


Fig. 4

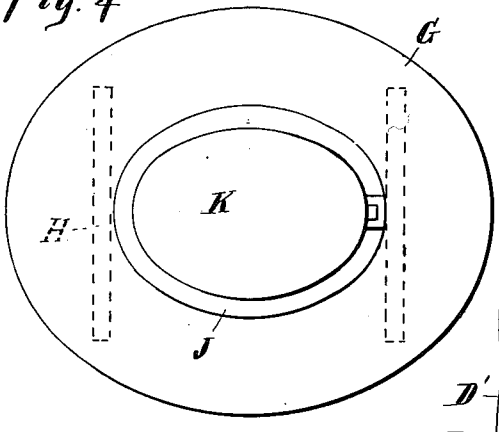


Fig. 5

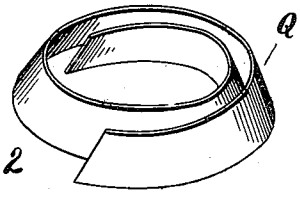
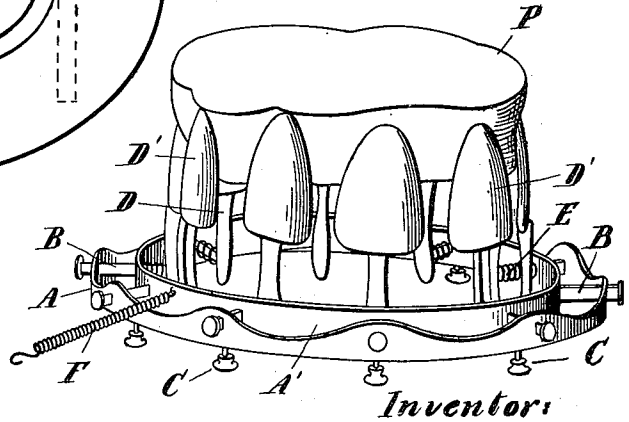


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

HUGH LYONS, OF LANSING, MICHIGAN, ASSIGNOR OF ONE-HALF TO JOHN F. CROTTY, OF SAME PLACE.

COMBINED HAT CONFORMATOR AND STRETCHER.

SPECIFICATION forming part of Letters Patent No. 447,751, dated March 3, 1891.

Application filed June 9, 1890. Serial No. 354,829. (No model.)

To all whom it may concern:

Be it known that I, HUGH LYONS, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Hat-Conformators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in hat-conformators; and the invention consists in the peculiar construction of the conformator-frame, and, further, in the peculiar construction of a shield for the interior of the hat and a shield for the brim of the hat while being heated; further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the accompanying drawings, Figure 1 is a vertical central section through my improved device, showing the hat in position and the frame applied to the heater as in use. Fig. 2 is a detached perspective view of the conformator-frame ready to be applied to the heater. Fig. 3 is a side elevation of the frame as applied to the head of the wearer. Fig. 4 is a plan view of the heater-stand and heater. Fig. 5 is a detached perspective view of the brim-protector.

A A′ are oval rings secured together, one within the other, and forming a frame of the general shape of that part of the head on which the hat is worn, but somewhat larger.

B are slides radially-adjustably secured in suitable apertures in the frame and held in their adjusted position by means of the set-screws C. At the outer end these slides have secured thereon the head-conformators D, which at their upper ends are provided with the hat-conformator blades D′. Between the head-conformators and the inner ring A′ are the springs E, sleeved over the slides B.

F is the spring or other elastic band secured at one side of the inner ring and adapted to be detachably secured at the other side, forming a support for the conformator-frame when placed upon the head, as shown in Fig. 3.

As the head-conformators and hat-conformators are adjusted by means of the movement of the slides B, it is evident that if the set-screws C are loosened and the device placed upon the head of the wearer the springs E will be compressed and the head-conformators will bear against the head of the wearer. The set-screws now being turned up tightly and the device taken off, the shape of the head at the point where the hat is worn will be accurately given, and the hat-conformators D′ will give a similar shape upon which to shape the hat.

In order to give the desired shape to the hat, the heat must be applied to the interior of the brim at the point where the hat rests upon the head, and it must also be prevented from entering the crown of the hat, for if it entered the crown of the hat it would soften the shellac in the sides and crown and cause it to cave or kink in, thereby making it necessary to reblock it. The rim of the hat must also be kept free from the heat, thereby preventing any damage to the brim from the heat.

To accomplish these results I construct my heater and the crown and brim protectors in the following manner: G is the base-plate, supported slightly above the table or stand, upon which it is placed by means of the legs or cleats H. The plate is preferably perforated at I to allow of a supply of air to the burner. Upon the top of this plate is secured a metallic plate and rim J, to which is hinged a drum or heater K, perforated at L to allow the products of combustion to escape into the hat. Within this drum is placed any suitable heater. I preferably use a small plate M, in which is placed a small amount of alcohol or other combustible material.

Around the drum K is placed a number of vertical brackets N, which have in their upper ends the bearings O, upon which the ring A of the conformator-frame is designed to be placed.

P is a flexible pad placed within the hat-conformators and of suitable size to fill the entire space within the crown of the hat above the rim thereof, as plainly shown in Fig. 1.

Q is a brim-protector placed over the hat-conformators and bearing with its lower edge

against the outer ring A of the frame and with its inner edge tightly embracing the hat-conformators, and is of suitable width to extend beyond the rim of the hat. This brim-protector I make of a narrow strip of material of suitable shape to engage with the outside of the hat-conformators. I preferably make it in the shape of a split ring, of cloth, rubber, or other material, which will give the desired result and give it the necessary elasticity.

When I use cloth or other non-elastic material, I give it the desired flexibility by means of wires secured within the protector, the elasticity being desirable, so that when it is secured upon the conformator it will tightly embrace the sides of the hat-conformators, so that it may be adjusted to the various sizes to which the conformator is adjusted.

The parts being thus constructed, their operation is as follows: The conformator-slides being adjusted to the shape of the head and the hat-conformator slides to the shape of the hat in the manner previously described, I detach the spring F and place over the hat-conformators the ring Q, moving it down until its upper edge bears against the outer ring of the frame, its inner edge bearing tightly against the hat-conformators. I next place within the upper ends of the hat-conformators the flexible pad P. The hat is then placed in position over the hat-conformator blades, being moved down to bear with its lower edge against the top of the ring Q. The drum K is turned back upon its hinge, the inflammable material is placed in the saucer M and lighted, the drum is replaced in position, the products of combustion escaping through the apertures L. The conformator, with the hat upon it, is now placed upon the brackets N, the whole being arranged as shown in Fig. 1. It will be obvious from this description and the drawings that the heat will be concentrated upon the inner lower edge of the hat which rests upon the head. The shellac in the hat at this point will be softened by the heat and will allow it to assume the shape of the hat-conformators. The ring Q, inclining from its outer edge toward its inner edge, will deflect the heat which may impinge against its lower edge and direct it into the interior of the hat, thereby concentrating the heat at the point desired, while the pad P will prevent the heat from entering the crown of the hat and thereby damaging it. It will thus be seen that the heat is brought only to that point at which it is desired to be heated and the brim and crown of the hat are entirely protected from the effects of the heat, thereby preventing any damage to them.

By making the frame of two rings instead of a single solid ring I am enabled to get a much lighter frame, having all the benefits of the solid ring.

By directing the heat to that portion of the hat which is alone desired to be effected and shaped I am enabled to accomplish the result with the least possible amount of fuel and in the quickest possible time.

By making the drum of the heater slightly smaller than the interior of the conformator-frame the heat will be directed in its upward force to the sides of the hat, thereby being applied most directly to the point desired to be heated.

Heretofore the conformator-frames have been held upon the head by the friction of the head-conformators, due to the tension of the springs. This was a serious defect in their construction, and the band or strap F will carry the weight of the frame upon the head of the wearer, so that these springs may be of just sufficient strength to move the slides. I preferably make the straps F elastic by using a spiral spring or by rubber; but this is not necessary, as they may be made of inelastic material, and by simply making them adjustable the results may be likewise accomplished.

Without the use of the spring or strap F, with the springs of the conformator-blades properly adjusted, the device will be carried by its weight to a point too low upon the head, and it is impossible for one operator to properly adjust the same. With the use of the spring or elastic strap the conformator may easily be raised or lowered until it is at the proper point for taking the measurement.

What I claim as my invention is—

1. In a hat-conformator, the combination, with the base and heating medium, of supports in said base, concentric rings resting on said supports, spring-actuated conformator-blades adjustably secured in said rings, a pad adapted to be clamped between the blades, and an annular ring inclined upwardly, substantially as described.

2. In a hat-conformator, the combination, with the adjustable hat-conformator blades, of an annular strip arranged outside of the same and forming a shield for the hat-brim, and means for heating the hat, substantially as described.

3. In a hat-conformator, the combination, with the base-heating medium, supports, concentric rings, and spring-actuated slides having blades secured to their inner ends, of a shield inclined upwardly closely fitting around the blades and under the hat-rim, substantially as described.

4. In a hat-conformator, the combination, with the conformator-frame and heating means, of an annular strip arranged at the edge of the frame, having its lower face inclined upwardly from the outer edge, forming a protector for the brim and a deflector for the hat, substantially as described.

5. In a hat-conformator, the combination, with the conformator-blades, of a yielding pad arranged between the blades, and means

for heating the hat, substantially as described.

6. In a hat-conformator, the combination, with the blades and heating means, of a shield for the hat-rim, consisting of a split ring adapted to embrace the blades, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HUGH LYONS.

Witnesses:
CHAS. C. HOPKINS,
JOSEPH H. DUNNEBACKE.