F. J. MUHLFELD.

TONGUED REDUCER FOR LARGE CROWNED HATS.

APPLICATION FILED APR. 19, 1913.

1,097,255.

Patented May 19, 1914.

3 SHEETS—SHEET 1.

Fig. 1.

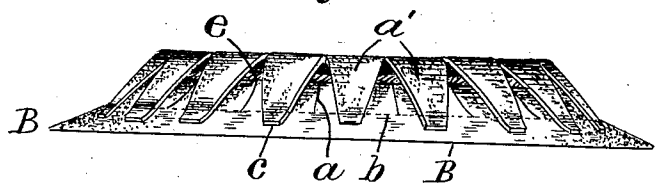
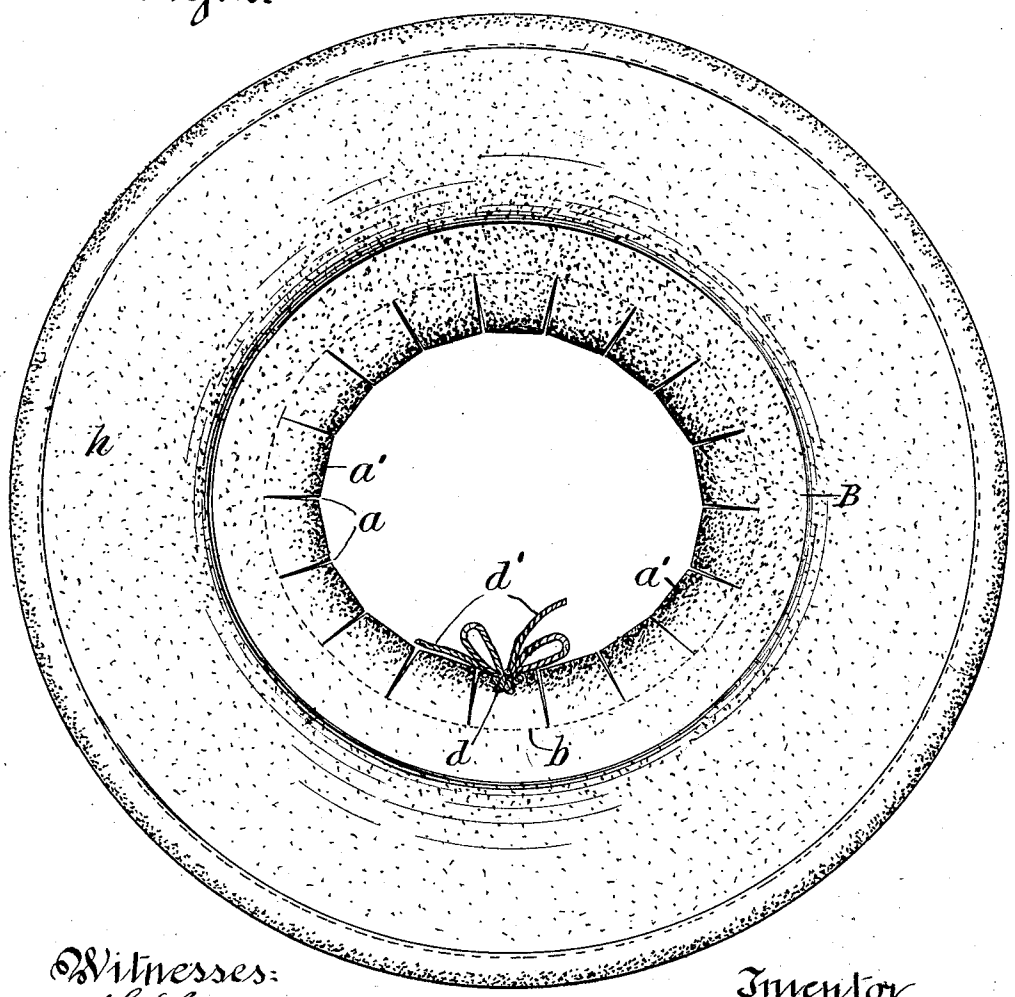


Fig. 2.



Witnesses:
L. Lee.
J. Walter Greenbaum.

Inventor
Frank J. Muhlfeld, per
Thomas L. Crane, Atty.

F. J. MUHLFELD.

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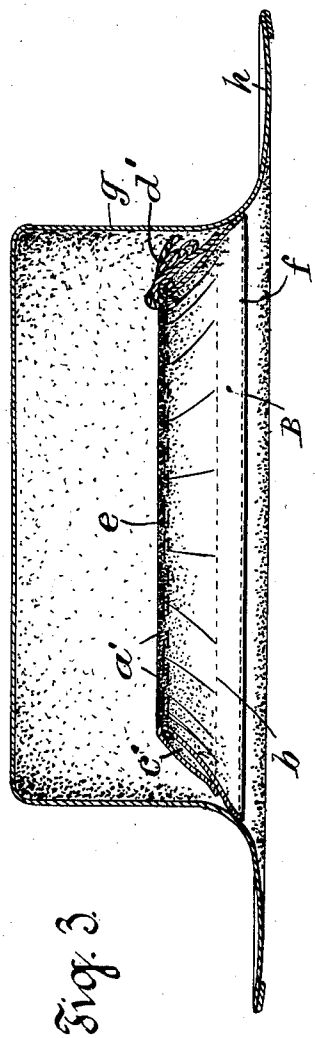


Fig. 3.

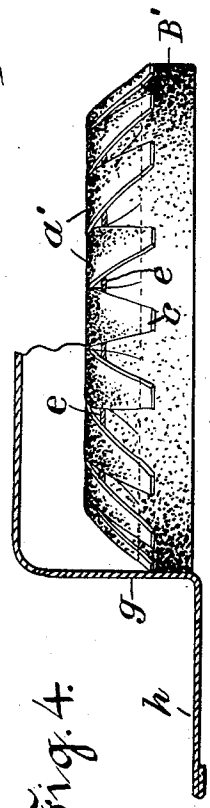


Fig. 4.

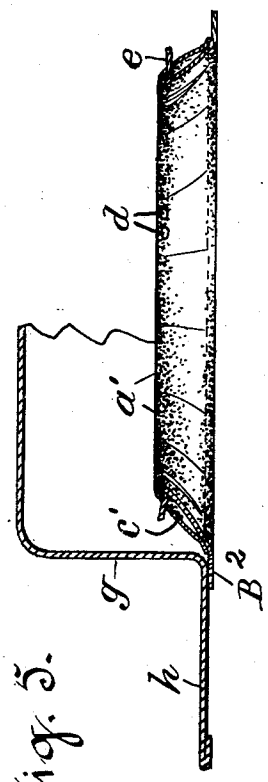


Fig. 5.

Witnesses
L. Lee.
Walter Greenbaum.

Inventor
Frank J. Muhlfeld, per
Thomas L. Crane, Atty

F. J. MUHLFELD.

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3 SHEETS—SHEET 3.

Fig. 7.

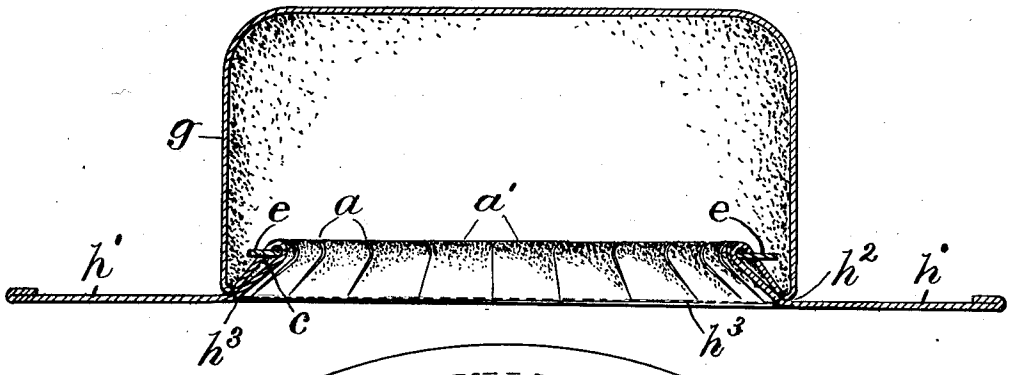
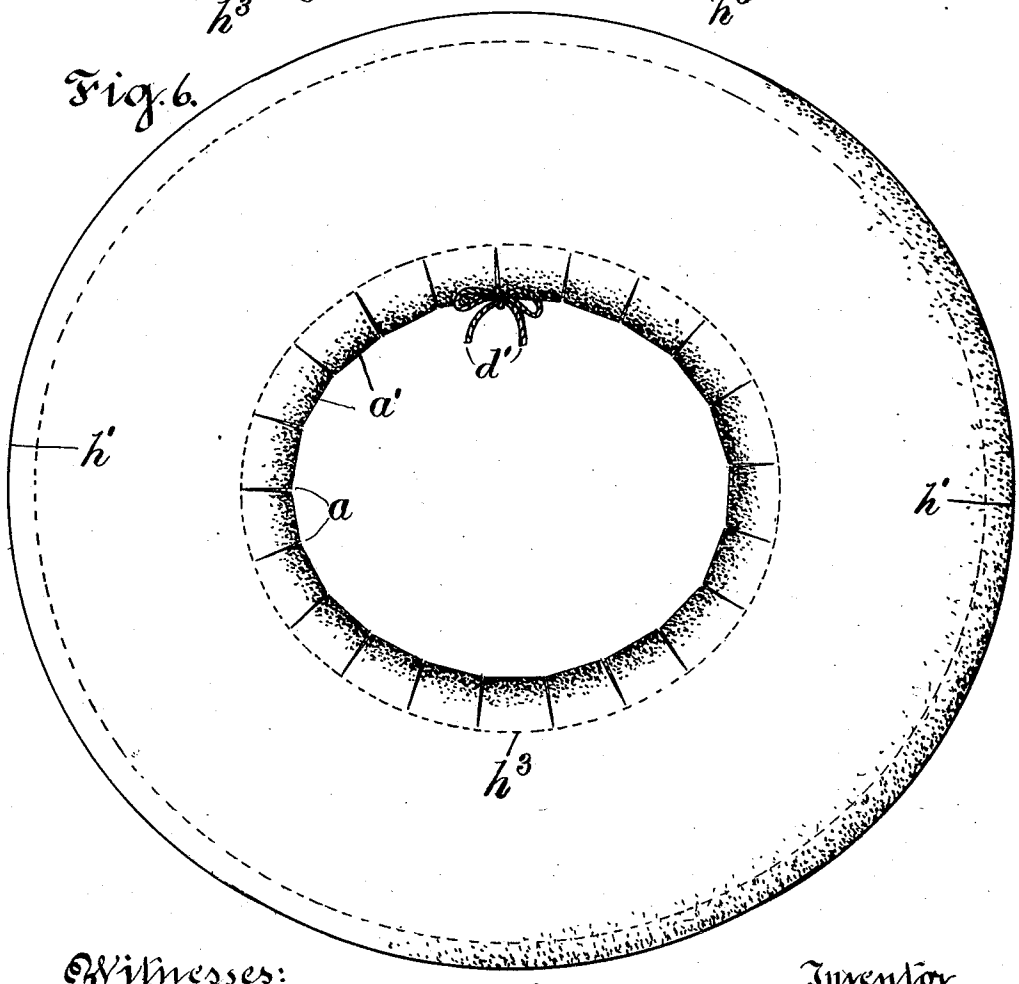


Fig. 6.



Witnesses:
L. Lee.
J. Walter Greenbaum.

Inventor
Frank J. Muhlfeld, per
Thomas S. Crane, Atty.

UNITED STATES PATENT OFFICE.

FRANK J. MUHLFELD, OF NEW YORK, N. Y.

TONGUED REDUCER FOR LARGE-CROWNED HATS.

1,097,255. Specification of Letters Patent. Patented May 19, 1914.

Application filed April 19, 1913. Serial No. 762,173.

To all whom it may concern:

Be it known that I, FRANK J. MUHLFELD, a citizen of the United States, residing at 805 Crotona Park north, New York, county of New York, and State of New York, have invented certain new and useful Improvements in Tongued Reducers for Large-Crowned Hats, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is a hat with improved self-adjusting head-opening.

The invention consists, broadly, in providing the head-opening of the hat with a series of yielding projections or tongues, extending inwardly toward the center of the head-opening and adapted to rest upon the head, and, wholly or in part, to support the weight of the hat, while their independence permits them to yield separately and thus accommodate the hat to the shape of the head.

The invention may be embodied in hats having the projections or tongues made in one piece with the crown and the brim, in which the inwardly projecting fold forming the narrow flat channel between the brim and the bottom of the crown, at their junction, such as shown in Figure 6 of Patent No. 899,887, heretofore granted to me under date of September 29, 1908, or any similar fold, has been cut with radial slits, producing a series of tongues each of which is capable of yielding independently and conforming to the shape of the head. Or it may be embodied in large crown hats, known as two-pieced hats; that is, hats whose crown is larger than the head-opening, which crown is usually made of a separate piece while the brim is made of another piece, permitting a head size smaller than the base of the crown, in which case the inwardly projecting portion of the brim may be provided with a series of slits, or cuts, or the base of the crown may be cut and turned inwardly, producing a series of tongues each of which is capable of yielding independently and conforming to the shape of the head. Or it may be embodied in a separate reducer or crown-piece, resembling such reducer or crown-piece as described in Patent No. 769,558, heretofore granted to me under date of September 6, 1904, or any separate crown-piece. In this case the outer edge of the reducer may be made to engage the brim or crown of the hat which has a relatively large head-opening that it is desired to reduce in size, and the inner edge of the reducer is cut radially producing a series of tongues each of which is capable of yielding independently and conforming to the shape of the head. In the two latter forms the tongues may be turned back to any degree desired, and even sufficiently to permit their extremity, if desired, to be attached to the body of the material from which they are cut. The folding back of the material greatly increases the support of the tongue while affecting its elasticity but slightly. The fold of such tongue, when turned back, becomes rounded, and forms a terminal loop well adapted to rest upon the head or hair. The tongues may be inclined in any manner desired, but in all cases point inwardly toward the center or toward the apex of a cone, and the annular body, in the case of the separate head-piece, may be conical, flat or cylindrical. To preserve the tongues from overstrain and the impairment of their elasticity, which would reduce their efficiency, a cord or draw-string adjustable in length may be inserted at or near the loose ends of the tongues, and this cord or draw-string may also be used to limit the size of the head-opening. Hats in which the tongues are cut in the material of which either the entire hat or the brim or crown of the hat is composed, are usually of sufficient stiffness to accomplish the desired result; but they may be specially stiffened, if desired, and where separate head-pieces are used, they may be made of stiffened felt or of any other suitable material, and may be covered or not, or a series of loops made of straw braid or other material, each forming an independent tongue, may be used.

The advantages of this invention are that a particular shape of hat may be used to fit various shaped heads, and, also, it permits a dealer to carry a small stock of sizes and shapes and yet supply his customers with hats that will fit. The tongues may be drawn in by means of the draw-string to the required size, or may be pushed out by the head of the wearer to the required size, or by inserting a wire of sufficient stiffness may be made to withstand the inward pressure of the inclined tongues. The tongues may be formed by a series of cuts in the edge of the material nearest the head; such cutting being done in such a manner as to form sep-

arate sections of sufficient length. The tongues may be made stiff enough, in this invention, to support the weight of the hat independently of the draw-string, but in all cases in this invention they are capable of individual adjustment to the shape and size of the head, thus differing essentially from any soft continuous fabric sustained by a draw-string or elastic, such as a shirred lining or a ring-shaped soft material.

The invention will be understood by reference to the annexed drawing, in which—Fig. 1 is an edge view of a conical hat-reducer embodying the invention; Fig. 2 shows the under side of the hat-brim with such reducer secured in the junction of the brim and crown; Fig. 3 is a central section of a hat furnished with the reducer of Fig. 1; Fig. 4 shows a hat in central vertical section, with an outside view of a reducer having its margin shaped to fit within a cylindrical crown; and Fig. 5 is a section like Fig. 4 showing a reducer with a flat body or margin fitted to the under side of the hat-brim. Fig. 6 shows the under brim of a hat having the reducer integral therewith; and Fig. 7 is a cross section of a hat at the center line of Fig. 6.

The various shapes of reducer shown herein are readily made of felt by the processes employed in hat-manufacture, in which a disk or cone of felt is readily worked into any desired shape and is stiffened in the desired degree with a solution of shellac or glue.

Fig. 1 shows a reducer formed of a conical blank by cutting the same radially on lines a extending from the center toward a line of stitching b indicating the inner edge of the marginal body B, from which the tongues a' thus project toward the center of the reducer. The ends of the tongues a' are folded over and their tips c attached to the said body by such line of stitching, forming a normally open loop c' in the end of each tongue. Such material is employed, in the manufacture of the reducer, that the tongues thus formed are enabled to retain their shape permanently and to support the weight of the hat when placed upon the head, while they are also adapted to yield in conforming to the shape and size of the head. The margin of the body is shown in Fig. 3 joined by stitching f to the curved junction of the crown g and the brim h, to which junction it is tangential, and as the tongues all slope inwardly they are adapted to contact with the head of the wearer when the hat is pressed down by the hand, and to be bent upwardly and outwardly until they fit the head in a comfortable manner.

Figs. 6 and 7 show the hat-reducer integral with the hat-brim h' and it may be thus made in one piece with the crown, as shown in Fig. 7, or separate from the crown, and the crown attached thereto by stitching at the band-line h^2. When made in one piece with the crown, the felt is blocked to form an annular inward fold at the band of the hat, as claimed in my prior Patent No. 899,887, and the fold is stitched at the band thus forming an annular reducer projecting into the head-opening, which is rendered yielding by slitting radially as in the other constructions shown. The divided sections of the annular fold form tongues with loops in which the limiting cord may be inserted as described above. The tongues are thus formed in the hat without the attachment of any extraneous parts. When the brim and reducer are made integral and separate from the crown, the construction is the same as that shown in Fig. 5, but the marginal body B^2 is of suitable diameter to form the brim, and the crown is attached thereto at the line of the band h^2. See Fig. 7. When the brim is made in one piece with the reducer, the cutting of the material radially, and bending the ends of the sections backwardly, forms the looped tongues. The radial tongues are wedge-shaped like those in Fig. 1, and their extremities are turned backward and attached to the inner side of the brim.

The crown and the tongues are proportioned to fit heads varying within a certain range, the tongues yielding more or less in proportion to the size of the head upon which the hat is fitted.

Any other material besides stiffened felt, which will not fray, and has the requisite stiffness and elasticity may be used.

The loops of the tongues may be oval like those in Figs. 1 to 7; or any other desired shape.

It is obvious that when the hat is pressed upon the head each loop or tongue can yield independently, so that any one or more which interferes with a comb would be pushed outwardly, and any group of the tongues which was located over a knot or coil of hair would in like manner be pushed upwardly and outwardly more than others, thus conforming the reducer to the size and shape of the head.

To preserve the tongues from overstrain and the consequent impairment of their elasticity, which would greatly reduce their efficiency, I prefer to extend the draw-string e through the loops at the inner ends of the tongues, bringing the ends of the string out through holes d shown in Fig. 5, which permits the ends d' of the string to be tied, as shown in Figs. 2 and 3, in any required adjustment, to hold the tongue in the relation best suited to a head of particular shape and size. The holes would be close to the loop of the tongue so that the ends of the string when tied may, if desired, be folded backwardly over the edge of the reducer, as

shown in Fig. 3. The hat-reducer thus possesses an adjustment which can be varied and adapted to suit the preference of the wearer, the string not interfering with the accommodating powers of the tongues, but limiting the periphery of the reducer, for which allowance would be made in tying the string, so that any of the tongues which were compelled to yield in fitting the head would have the required feedom to do so. My reducer thus possesses a capacity for self-accommodation to the head by the independent yielding of the tongues, and when provided with a draw-string it possesses means to regulate the elasticity of the tongues and also to control the limit of their movement.

The body-portion B′ is shown of cylindrical shape in Fig. 4, and the body B^2 of Fig. 5 is shown flat, thus adapting the reducer for attachment to the inner side of a round crown, or to the under side of a flat brim; and such marginal portion may be made of any required form, provided the tongues are so connected therewith as to yield separately in conforming to the head.

For women's hats, the separate form for the tongued-reducer is desirable, as women's hats are made, in conformity with fashion, with great variations in the size of the crown, and such separate reducer may be readily secured within the crown or brim of the hat at or near the hat-band, to support the hat in the desired position upon the head. By making the tongued-reducer separate from the hat, it may be fitted to a crown of any size, the outer margin of the reducer being trimmed, if necessary, to fit the desired portion of the crown or brim in any of the modes shown in Figs. 3, 4 and 5.

From the above description it will be seen that this invention does not consist merely of a hat-reducer formed by sewing a strip or securing an annulus of suitable material within the head-opening, nor the fastening of tongues separately to the hat-band to project inwardly, as none of such constructions produces the effects obtained by making the tongues integral with the substance of the hat, or integral with a continuous marginal body which supports each tongue independently of any stitching; but the invention comprises a hat-reducer having a marginal body with integral elastic tongues projecting inwardly therefrom; the marginal body and tongues forming a single piece which may be secured to the hat-brim or crown with very little labor. It is also obvious that such a reducer may be an integral part of a hat-brim to which a crown is attached by stitching, or integral with both brim and crown by forming the band of the hat with an inwardly projecting fold which can be divided into radial sections to form the tongues. In each of these constructions the tongues have an integral connection with a continuous annular support, and are thus adapted to retain their resilience much better than if they were formed separately and secured separately within the hat.

Having thus set forth the nature of the invention what is claimed herein is:

1. The combination, with a hat having a crown larger than the head, of a hat-reducer having a continuous marginal body attached to the hat around the head-opening, and having a series of inwardly projecting integral tongues adapted to yield separately when fitted to the head.

2. The combination, with a hat having a crown larger than the head, of a hat-reducer of elastic material having a continuous marginal body attached to the hat around the head-opening and having a series of inwardly projecting integral tongues with their ends reflexed and secured to the material from which they are cut, and cord extended through the loops of the tongues to hold them within the desired limit, with its ends projecting to be tied together in various adjustments.

3. A hat made of felt and having an inwardly projecting fold at the band divided into sections forming looped tongues adapted to yieldingly support the hat upon the head.

4. A hat-reducer having a continuous marginal body for attachment to the hat and a series of tongues projected inwardly from the margin and adapted to support the hat upon the head and to yield independently for accommodating heads of various sizes and shapes.

5. A hat-reducer of elastic continuous material having a marginal body for attachment to the hat and a series of inwardly projecting integral tongues with their ends reflexed and secured to the body, and adjustable means to control the yielding of the tongue.

6. A hat having a series of tongues projected from the hat-band into the head-opening, such tongues being formed with loops having their lower sides integral with the brim of the hat.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANK J. MUHLFELD.

Witnesses:
E. J. MacCready,
Francis Parkman.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."