May 12, 1936. E. WITTCOFF 2,040,354

HAT BRIM AND METHOD OF CONSTRUCTING THE SAME

Filed April 2, 1934

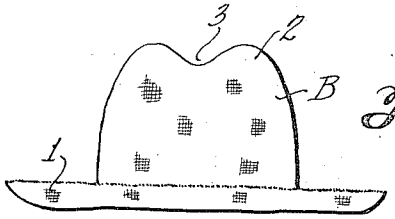
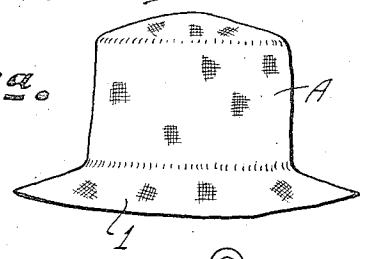


Fig. 1a.

Fig. 1.



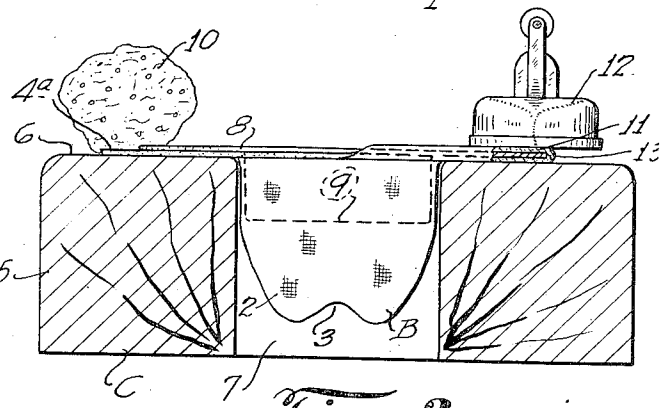


Fig. 2.

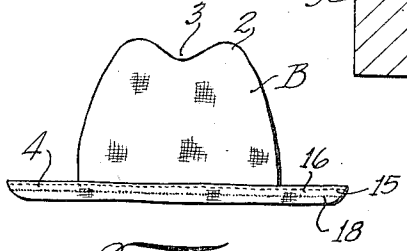


Fig. 3.

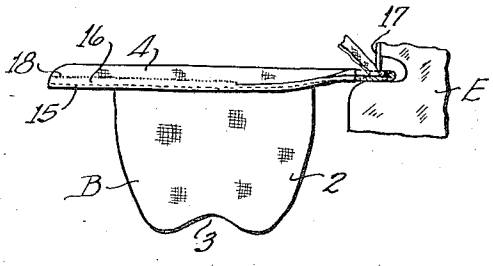


Fig. 4.

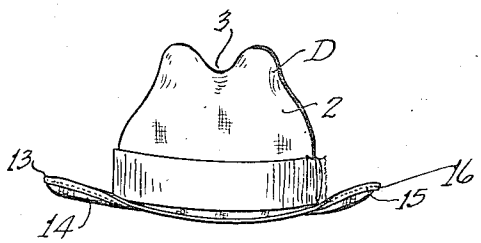


Fig. 5.

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HAT BRIM AND METHOD OF CONSTRUCTING THE SAME

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Application April 2, 1934, Serial No. 718,553

4 Claims. (Cl. 2—193)

This invention relates generally to the manufacture of hats. More particularly, my present invention has to do with a certain new and useful improvement in the brims of hats constructed of fabricated strand bodies and to the method of constructing the same and has for its chief object the production, in a simple, economical, and convenient manner, upon the brim of a hat of the type stated, of an attractive, durable, stiff, waterproof and strong rim-finish capable of withstanding considerable wear and hard usage.

And with the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts and the method and process presently described and pointed out in the claims.

In the accompanying drawing,—

Figure 1 shows a fabricated paper-strand hat-body in its rough or original state or condition;

Figure 1*a* shows the hat-body following preliminary shaping or blocking;

Figure 2 is a diagrammatic sectional view through a forming-fixture employed in the structural development of the brim of the finished hat, the view also illustrating several successive steps of such development;

Figure 3 is a view of the hat-body illustrating the partially finished brim thereof as appearing subsequent to the several development steps illustrated in Figure 2;

Figure 4 is a diagrammatic view of a trimming-machine, showing the manner of carrying out another step of the process of finishing the brim; and

Figure 5 illustrates in front elevation a completed or finished hat embodying a brim constructed and finished in accordance with and embodying my invention.

Referring now more in detail and by reference characters to the drawing, A designates a so-called toyo hat-body preferably either of the bangkok or jami type, in its raw or original condition as when received from the manufacturer. Such hat-body A is constructed or fabricated by weaving or plaiting of preferably paper-strands coated or impregnated with a collodion solution and in its original condition embodies an excessively wide brim **1**, is soft and pliable, and is unsightly and unattractive in appearance, merely approximately, as shown, conforming to the desired shape and contour of the finished hat shown in Figure 5.

Now, for the production of the finished hat in accordance with my present invention, the hat-body A is first subjected to pressure in a suitable press (not shown) and is thereby given a preliminary shaping or blocking, the crown **2** of the so-blocked hat-body B preferably being formed with a longitudinal depression, as at **3**, for re-enforcing and strengthening the hat-structure and improving the general appearance thereof and the brim **1** being partially shaped, all as best seen in Figure 1*a*.

The so shaped hat-body B is preferably now stiffened throughout by a coating of a suitable sizing solution, preferably of the cellulose-gum-lacquer type, as more fully described in Letters Patent for Imitation straw hat, No. 1,953,697, of April 3, 1934.

Then, after such sizing coat has dried, the excessively wide brim **1**, is preferably by a suitable machine (not shown), trimmed or cut to merely approximately, in fact, to dimensions somewhat more than, the final desired width of the brim of the finished hat. The so reduced brim is designated **4** in Figure 3.

Next the hat-body B is placed in a forming-fixture C, which comprises a torus-like block or support **5** having a flat upper surface, as at **6**, and being provided with a central suitably enlarged recess or pocket **7**.

The fixture C also includes a former or shield **8**, which comprises a preferably flat annular plate or disk having in plan a marginal contour of less dimensions than the roughly trimmed brim **4** for, in fact, defining the final desired brim shape and contour, the former-plate **8** being provided with a central depending annular cup **9** dimensioned to fit within the crown **2** of the hat-body B, as best seen in Figure 2.

The hat-body B is operably disposed with respect to the fixture C with its crown **2** within the recess **7** and its brim **4** rested or supported on the surface **6** of the block **5**. The former-plate **8** is next flatwise mounted on the brim **4** with its cup **9** disposed in the crown **2** and then manipulated, manually or by any suitable means not shown, for causing the brim **4** to be firmly pressed or clamped therebetween and the block **5** with the outer marginal portion **4***a* of the brim **4** projecting outwardly of and exposed beyond the annular margin of the former **8**, as is clearly shown in and as will be understood from the left-hand portion of Figure 2.

The hat-body B being thus clamped in the fixture C, by means of a suitable distributing implement, as a liquid-absorbent sponge or the like **10**, a coating of a suitable solvent of the sizing material or solution, which, if the latter be of the nitro-cellulose or cellulose-gum-lacquer type, may comprise alcohol or the like, is applied or wiped upon the exposed brim marginal-portion **4***a*, for the purpose of dissolving the sizing solution from, or softening the same to a large extent upon, the brim marginal-portion **4***a*, the resulting semi-finished hat then having its brim marginal-portion **4***a* in a softened, plastic, and readily pliable or flexible condition, the sizing solution upon the remainder of the hat-body B, however, being unaffected and the hat-body B

being, therefore, for the most part relatively stiff and inflexible.

The so-softened, plastic, and pliable brim marginal-portion 4*a* is then carefully curled or folded, as by a flap 11, inwardly over the edge and overlapped upon the margin of the plate 8, the flap 11 extending entirely around the circumference of the plate 8 and hence also of the brim 4. Then a suitable pressure and heat-applying device, as an electric-iron 12 or the like, is employed, as will be understood from the right-hand portion of Figure 2, for heating and pressing the turned or folded flap-portion 11 flatwise upon the former 8 for both evaporating the solvent and pressing and flattening the strand-fibers for imparting to the brim a circumferential crease or fold, as at 13, at the junction of the flap 11 with the brim-proper 4, which crease or fold 13 eventually constitutes the edge-finish of the brim 14 of the completed hat D, shown in Figure 5.

The crease or fold 13 having been thus formed and the former-plate 8 being suitably removed, the hat-body B is removed from the fixture C and is sewed with a line of stitching 15, in the customary manner, the stitching 15 being applied to the brim a short distance, as an eighth of an inch, inwardly of the crease or fold 13 for flatwise securing the flap 11 to the brim-proper 4 and thereby providing the brim 4 with a two-ply or double thickness rim or edge 16, as best seen in Figures 3, 4, and 5.

The hat-body B is then processed in a suitable trimming-machine E, which, in the present instance, by means of a properly adjusted reciprocatory knife 17, cuts through and neatly and smoothly trims off the rough inner-portion 18 of the flap 11 inside of the stitching 15, as best seen in Figure 4.

As has been said, the brim marginal-portion 4*a*, for the formation of the finish-edge 16, has been largely divested of its sizing solution, and for the purpose of restoring the stiffness of the rim of the brim of the finished hat, the same is re-coated, as by spraying, dipping, or other suitable application, with suitable sizing solution preferably similar to that previously employed for sizing the hat-body A.

The hat-body B is then, as by spraying or in other suitable manner, again coated with a suitable finishing solution preferably also of the cellulose-gum-lacquer type, which further stiffens and waterproofs the hat-body B, similarly, with respect to the method and materials employed, as set forth in said Letters Patent No. 1,953,697.

The so treated and processed hat-body B is then subjected to pressure in a suitable mold or press, not shown, and is thereby given its desired final shape and contour, the stiffening crown-recess 3 in the final hat D being preferably further accentuated and the brim 14 being artistically shaped and formed, all as best seen in Figure 5.

After the finishing-coating has dried and the hat finally blocked as described, the necessary findings or trimmings are applied to the hat-body D, and the same then becomes immediately available for consumer's use, as will also be understood from Figure 5.

I might add that, in the resulting final or finished hat, as constructed according to my invention, the brim with its evenly trimmed two-ply and thereby strengthened edge, readily holds its shape and presents a smooth, neat, and highly attractive appearance, most conducive to the ready salability of the hat and the comfort and pleasure of the wearer.

It will be understood that changes and modifications in the details of the several steps and the nature of the apparatus employed in the production of the hat may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

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

1. Those steps in finishing the brim of a hat constructed from a fabricated paper-strand hat-body, which consist in sizing the brim with a cellulose-gum-lacquer, trimming the brim to a dimension greater than the desired final dimension thereof, applying a solvent of the sizing to the marginal portion of the brim, folding the rim of such marginal portion inwardly upon the brim-proper, heating and pressing the folded marginal portion overlappingly upon, and stitching the same to, the brim-body, trimming said overlapping portion inside the stitching, re-sizing the double brim-margin with a cellulose-gum-lacquer, and then applying to the doubled brim-margin a finish surface coating of a second cellulose-gum-lacquer.

2. Those steps in finishing the brim of a hat constructed from a fabricated strand body, which consist in flatwise disposing on the brim a former-plate of lesser diameter than that of the brim, softening the exposed marginal portion of the brim, folding and pressing such marginal portion inwardly upon the plate to overlie the brim proper and form a circumferential crease, removing the plate, then by a line of stitching disposed inwardly of the crease, flatwise securing said overlying portion to the brim proper, and then trimming said overlying portion on a line disposed inwardly of said stitches.

3. Those steps in finishing the brim of a hat constructed from a fabricated strand body, which consist in flatwise disposing on the brim a former-plate of lesser diameter than that of the brim, softening the exposed marginal portion of the brim, folding and pressing such marginal portion inwardly upon the plate to overlie the brim proper and form a circumferential crease, removing the plate, then by a line of stitching disposed inwardly of the crease, flatwise securing said overlying portion to the brim proper, then trimming said overlying portion on a line disposed inwardly of said stitches, and then applying a finish coating of waterproof material to and upon the doubled brim margin.

4. Those steps in finishing the brim of a hat constructed from a fabricated strand body, which consist in sizing the brim with cellulose-gum-lacquer, flatwise disposing on the treated brim a former-plate of lesser diameter than that of the brim, softening by the application of a solvent the exposed marginal portion of the sized brim, folding and pressing such marginal portion inwardly upon the plate to overlie the brim proper and form a circumferential crease, removing the plate, then by a line of stitching disposed inwardly of the crease, flatwise securing said overlying portion to the brim proper, then trimming said overlying portion on a line disposed inwardly of said stitches, and then applying a finish coating of cellulose-gum-lacquer to and upon the doubled brim margin.

EDWARD WITTCOFF.