Jan. 19, 1971 H. ZIMMON ET AL 3,555,565

NURSE'S SURGICAL CAP

Filed June 30, 1967 4 Sheets-Sheet 1

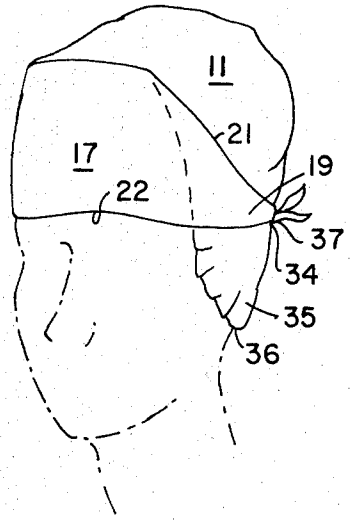


FIG. 1.

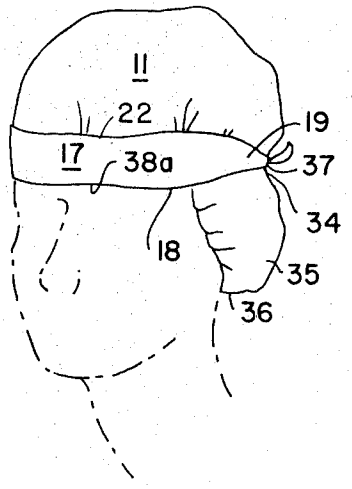


FIG. 4.

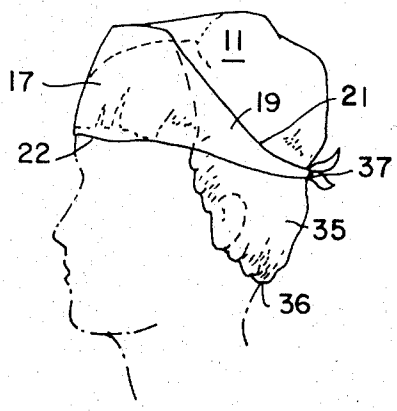


FIG. 2.

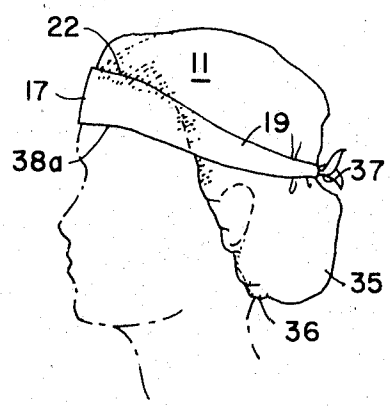


FIG. 5.

INVENTOR.
HAROLD A. ZIMMON
DEE L. STROM
BY Julian Caplan
ATTORNEY

NURSE'S SURGICAL CAP

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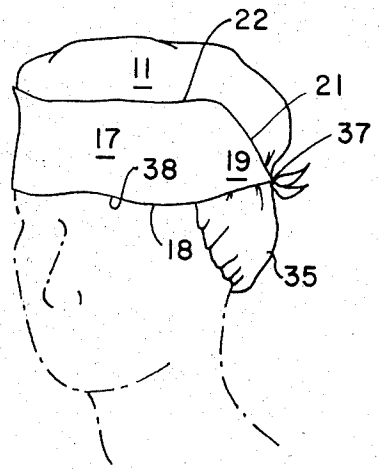


FIG. 6.

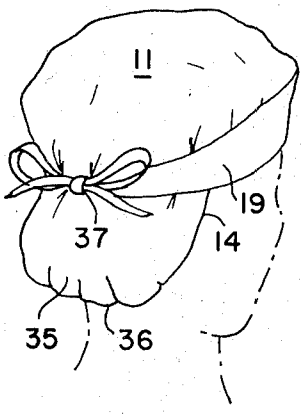
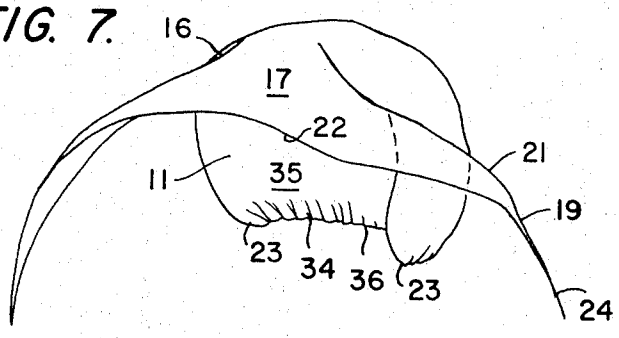


FIG. 3.

FIG. 7.



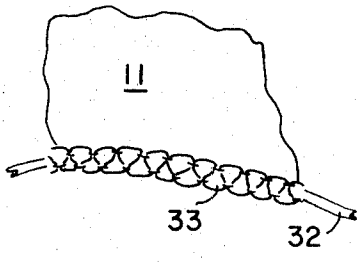


FIG. 10.

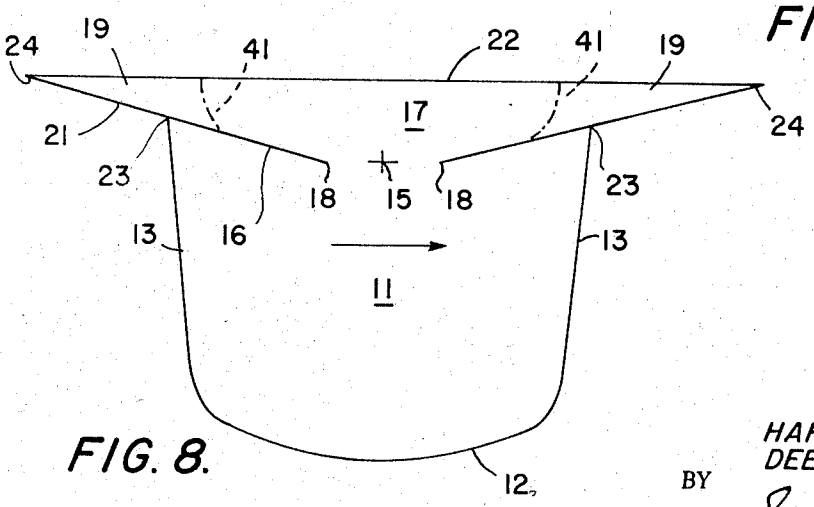


FIG. 8.

INVENTOR.
HAROLD ZIMMON
DEE L. STROM
BY Julian Caplan
ATTORNEY

NURSE'S SURGICAL CAP

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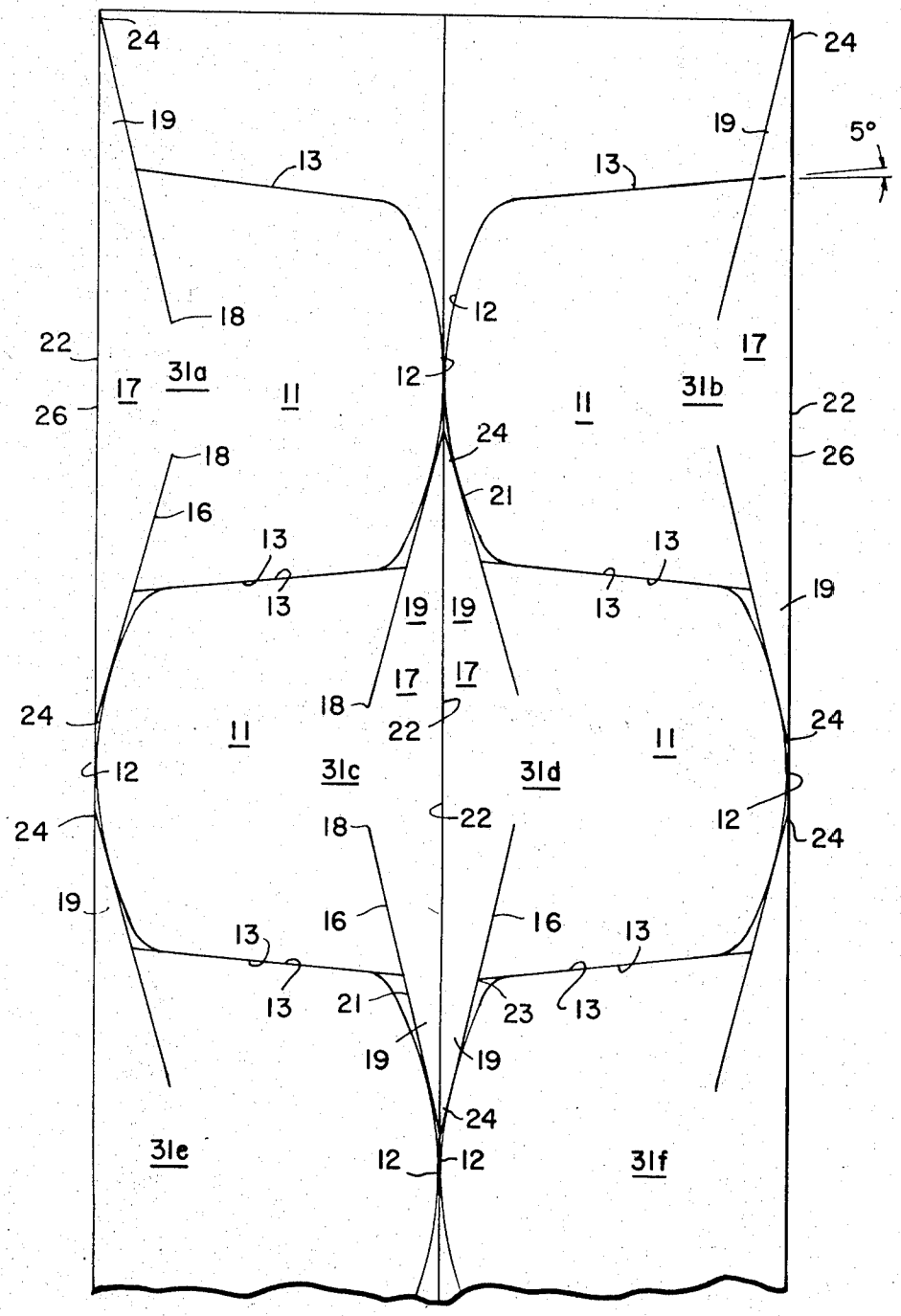


FIG. 9.

INVENTOR.
HAROLD A. ZIMMON
BY DEE L. STROM
Julian Caplan
ATTORNEY

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NURSE'S SURGICAL CAP

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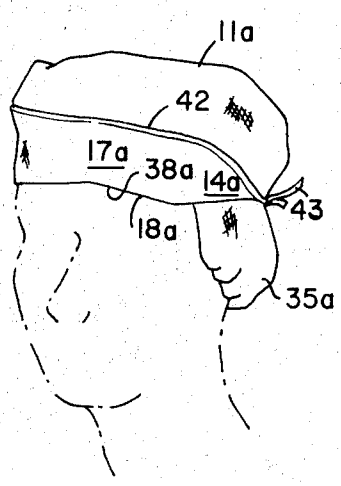


FIG. 11.

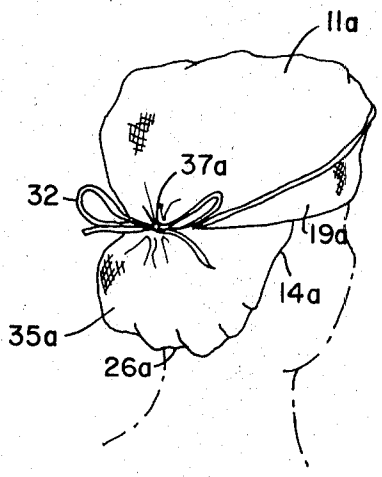


FIG. 12.

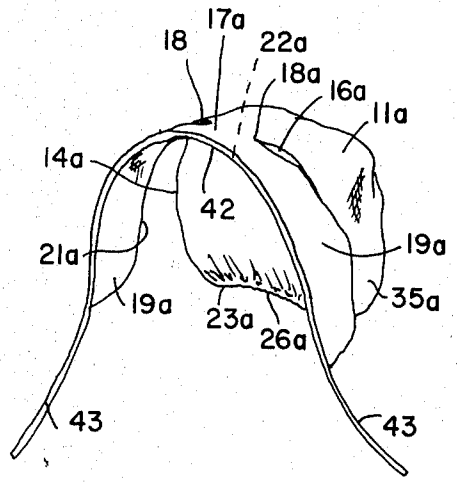


FIG. 13.

INVENTOR.
HAROLD A. ZIMMON
DEE L. STROM
BY Julian Caplan
ATTORNEY

United States Patent Office

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3,555,565

NURSE'S SURGICAL CAP

Harold Zimmon, Los Altos Hills, and Dee L. Strom, Sunnyvale, Calif. (both % Zimmon & Company, Inc., 215 O'Neill Ave., Belmont, Calif. 94002)

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Int. Cl. A42b 1/16

U.S. Cl. 2—198

1 Claim

ABSTRACT OF THE DISCLOSURE

A one-piece cap completely covers the hair regardless of extreme variations of hair style. The blank from which the cap is fabricated has an enlarged main body portion and an integral band portion having laterally extending ties. An elastic is fastened around the perimeter of the main body portion, gathering the same together in a snood-like pouch. The cap is applied by inserting the hair at the back of the neck into the snood-like pouch and drawing the cap up over the top of the head and down over the forehead, then drawing the band back to envelope the hair at the sides of the head, thus completely covering the hair, and tying the ends of the ties behind the back of the head. Adjustability for height of the cap is achieved by the band, which may extend down over the forehead or be folded up either entirely or partially. Alternatively, the elongated ties may be replaced with binding tape.

One important feature of this invention is the fact that regardless of extreme hair style variations, the adaptability of this cap enables it to be applied in such manner as to completely cover the hair. It will be understood that some hair styles produce a fullness at the top of the head and this may be enhanced by curls or even artificial hair pieces. Other styles produce a fullness at the back of the neck. The present cap will cover these and other styles and even cover curlers and rollers. Thus stocking different cap sizes is avoided.

A further advantage of the invention is the fact that the hair is not mussed when the cap is applied, worn or removed. This feature of the invention even enables the cap to be put to an alternative use—to hold the hair in place while sleeping.

A still further feature of the invention is the fact that it is readily applied by the wearer and stays in position once it is tied in place. When in position the cap has a neat, professional appearance.

The construction of the cap is such that there are no elastic bands or ties fitting across the forehead or over the ears, such as commonly used in other caps. Hence this cap is more comfortable to wear. The cap is light in weight, which also improves the comfort of wearing the same.

One additional advantage of the invention is that bangs are covered and, further, are held in normal position against the forehead. Other caps have elastic or ties which tend to pull the lower edge of the cap upward along the forehead, which in turn tends to curl the bangs upward. This undesirable result is avoided by the present invention.

A principal feature of the invention is the fact that it is constructed of a single piece of material in simple fabricating operations, thereby reducing manufacturing and material costs.

An important feature of the invention is that its low cost of material and fabrication permits it to be used as a disposable cap which is discarded after surgery is completed. Accordingly, laundry expense is eliminated. On the other hand, the cap may be made of more durable material and re-used. When made of fabric, the cap may be washed and/or sterilized.

Still another feature of the invention is the shape of the blank from which it is formed. By alternating the directions of adjacent blanks the bands and main body portions interfit, achieving great economy in use of material.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings in which similar characters of reference represent corresponding parts in each of the several views.

In the drawings:

FIG. 1 is a perspective view from the front showing the cap in place with the band down.

FIG. 2 is a side elevation of FIG. 1.

FIG. 3 is a perspective view of the cap of FIG. 1 from the rear.

FIGS. 4 and 5 are, respectively, views similar to FIGS. 1 and 2, showing the band partially folded up.

FIG. 6 is a perspective view showing the band folded fully up.

FIG. 7 is a perspective view of the cap of FIG. 1 prior to application.

FIG. 8 is a plan view of a blank from which the cap is fabricated shown prior to the application of the elastic band.

FIG. 9 is a fragmentary plan view of a portion of a web of material showing how a plurality of blanks in accordance with FIG. 8 interfit to achieve economy of material and fabrication.

FIG. 10 is a fragmentary perspective view of an edge of the cap showing elastic stitched to the margin of the main body portion.

FIGS. 11 and 12 are views similar to FIGS. 1 and 3 of a modification.

FIG. 13 is a view similar to FIG. 7, of the modification of FIGS. 11 and 12.

The present invention comprises a one-piece cap which may be fabricated from a variety of materials. In a preferred form of the invention the cap is disposable after a single use and for such purpose may be made of a nonwoven cellulose fabric or a yarn-reinforced cellulose, paper or inexpensive cloth. Particularly where sterility is not essential, the cap may be re-used and in such circumstances the material may be more durable, such as thicker paper or cloth. Where repeated use is desired, and particularly where the cap is sterilized between uses, a lightweight canvas-like fabric may be used.

In the form of the invention shown in FIGS. 1–10, the cap is intended for single use and the ends of the band are used to hold the cap in place. Where a more durable cap is desired, one longitudinal edge of the band may be reinforced with tapes as shown in FIGS. 11–13, and the extended length of the tapes used as ties. In the latter instance, the band is shorter than in the modification of FIGS. 1–10 In other respects the two modifications of the invention are essentially the same.

As viewed in FIG. 8, the blank from which the cap is fabricated has an enlarged main body portion **11** having

an arcuate bottom edge **12** of a large radius having its center at about point **15** at the top or portion **11** and having upward-outward slanted side edges **13** disposed at an angle of about 85° to the horizontal. Slits **16** are formed at the top of portion **11** slanted downwardly-inwardly at an angle of about 15° to define the top of main body portion **11**. The inner terminal points **18** of each slit **16** are spaced apart about six inches. Above slits **16** and points **18** is band **17** having elongated triangular points **19** defined by upward, outward slits **16** and the top horizontal edge **22** of the blank beyond sides **13** are lower edges **21** which are extensions of slits **16**. The extremities **24** of points **19** are considerably outwardly disposed relative to the points **23** of intersection of edges **13** and **21**. Band **17** and main body portion **11** are joined together between the points **18**. Preferably the grain of the material extends horizontally as indicated by the arrow in FIG. 8, since this provides the greatest strength to resist the stresses to which the cap is later subjected. The blank of FIG. 8 may be readily fabricated from a web of material with great economy of material, as shown in FIG. 9. Parallel sides **26** represent the side edges of a long web of material of which the blanks are formed. In actual practice many layers of material may be stacked and all layers cut in a single cutting action. The pattern of blanks **31***α*–**31***f* is shown, blanks **31***a* and **31***b* being the uppermost. The curved edges **12** of these two blanks are tangent an the edges **22** coincide with web edges **26** or are closely adjacent thereto. Upper points **19** of blanks **31***a* and **31***b* extend to or adjacent the upper edge of the web. The lower side **13** of blank **31***a* coincides with the upper side **13** of blank **31***c*. Edges **22** of blanks **31***c* and **31***d* coincide. The edges **12** of blanks **31***c* and **31***d* are tangent to opposite edges **26** of the web. Upper points **19** of blanks **31***c* and **31***d* extend to the point of tangency of edges **12**, **12** of blanks **31***a*, **31***b*. The lower points **19** of blanks **31***c*, **31***d* extend to the point of tangency of edges **12**, **12** of blanks **31***e*, **31***f*. Blanks **31***e*, **31***f* are oriented in the same direction as blanks **31***a*, **31***b*, respectively, while blanks **31***c*, **31***d* intermediate the aforementioned four blanks are oriented 180° in the opposite direction.

The foregoing alternation of blanks accomplishes considerable economy of material. Other than the extreme ends of the web, almost all of the material is used, as is clear from FIG. 9.

After the blank has been cut, a piece of elastic **32** is fastened to the edges **12** and **13**, commencing at the points **23** where edges **13** and **14** intersect and extending the entire length of both sides **13** and the bottom edge **12**. Elastic **32** may be applied by over-stitching **33**, or by other means. After the elastic **32** is applied, the edges **13** and **12** are gathered together in tucks **34** or folds and reduced in length as best shown in FIG. 7, so that the distance between the points **23**—**23** is considerably less than in the blank. Generally the back of the cap assumes the form of a pouch or snood **35**. FIG. 7 shows the final assembly of the cap prior to installation on the head.

In use, the cap is very versatile in that it may be adjusted to fit various head sizes and, also importantly, to accommodate a wide variety of hair styles even when curlers and rollers are applied to the hair and yet completely cover all of the hair, a necessity in surgical use. In applying the cap, the bottom back edge **36** is tucked under the back of the hair and against the back of the neck of the wearer. All of the back hair is inserted in the pouch or snood, as is best shown in FIG. 3. Thereupon the main body portion **11** is drawn up over the top of the head and down on the forehead to cover all hair at the front. Careful examination of FIGS. 1, 4 and 6 will show that the volume of the hair on the head varies. In FIG. 6, the hair is very sparse and flat, especially on the top of the head, while in FIG. 1 the hair is piled high at the top of the head. In FIG. 4, the hair is of intermediate height. The positioning of band **17** accommodates any of the hair styles. Thus in the flat style of FIG. 6, band **17** is folded straight up to overlap the front of portion **11** and the points **19** are drawn back above the level of the ears and tied in a knot **37** at the back of the head. The points **19** cover the hair at the side of the head. It will be noted that the bottom forward edge **38** of FIG. 1 is just above or at the level of the eyebrows.

In FIG. 1, band **17** is not folded up at all so that the edge **22** is bottommost and at eyebrow level. Hence even with a high hair style, all the hair is completely covered. As shown in FIG. 2, the hair style includes bangs. Note that the bangs are held in normal position against the forehead and that there is no tendency of lower edge **22** to curl the bangs upward. In FIGS. 1–3 the fullness of the hair style includes curls on top of the head. Even hair pieces, curlers or rollers may be adequately covered.

In FIG. 4, band **17** is partially but not completely folded back so that the bottom **38***a* of the fold is at eyebrow level. In this position, as shown in FIGS. 4 and 5, the hair is low at the crown of the head but full at the back of the neck.

In any of its positions, the cap is neat and professional in appearance and remains securely in covering condition.

The form of the invention shown in FIGS. 11–13 is quite similar to that of the preceding modification, except that the ends of the band **17** are shorter, being terminated at lines **41** of FIG. 8. The edge **22***a* of FIG. 13 is reinforced by a folded-over tape **42** and the ends **43** of the tape extend beyond the band and are used as ties. In other respects the construction of the cap, FIGS. 11–13, is essentially the same and corresponding portions are identified with the same reference numerals as in FIGS. 1–10 followed by the subscript *a*.

Although the foregoing invention has been described in some detail, by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be practiced within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A cap for completely enclosing the hair of the wearer and adjustable for a variety of hair styles, said cap formed of a single piece of foldable sheet material and comprising a main body portion and a band having a juncture adjacent the center of the front edge of said body and defined laterally of the center by slits extending inward toward said center but terminating with the inner ends of said slits spaced apart a distance about equal to the width of the human forehead, said band joined to said main body portion continuously between the inner ends of said slits, said band having lateral extremities, said band being foldable upwardly and rearwardly along any selected line extending lengthwise of said band to vary the extent of overlap between said band and body and to locate a lower edge portion of said band against a wearer's forehead directly beneath the hair, said body portion having a curved back edge of extended length, and an elastic fixed to at least a portion of the perimeter of said back edge for gathering said back edge together to form a snood-like pouch at the back of said cap, said pouch extending rearward and downward to fit under the back hair of the wearer and said back edge of said pouch positioned and spaced a distance from said band to enable said back edge to lie against the back of the neck, around the sides of the head above the ears and inwardly toward, but spaced outward from, the center of the forehead to about the upper corners of the forehead, said extremities shaped and dimensioned to be drawn around the sides of the head above the ears whereby said cap encloses the hair at the side and all of the hair of the wearer is completely covered by said cap, said lateral extremities being triangular in shape and of extended length beyond the sides of said main body portion.

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5

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HERBERT F. ROSS, Primary Examiner

U.S. Cl. X.R.

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