April 24, 1934. J. H. TICE, JR 1,955,986

VENTILATED HAT

Filed Nov. 21, 1932 2 Sheets-Sheet 1

Fig. 1.

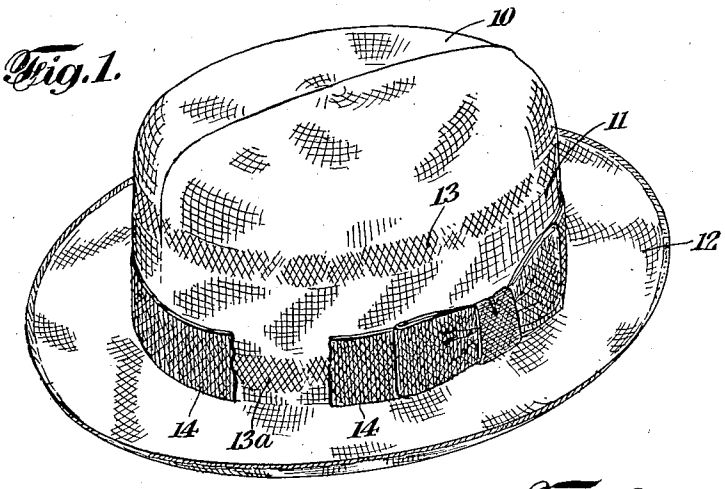


Fig. 2.

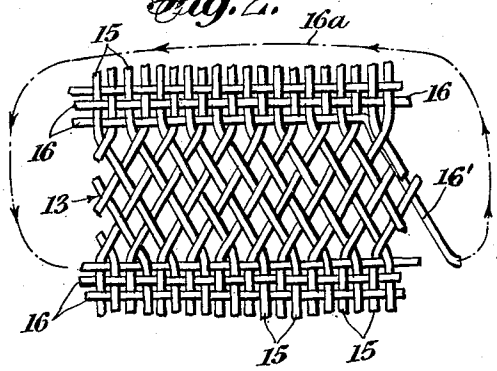


Fig. 3.

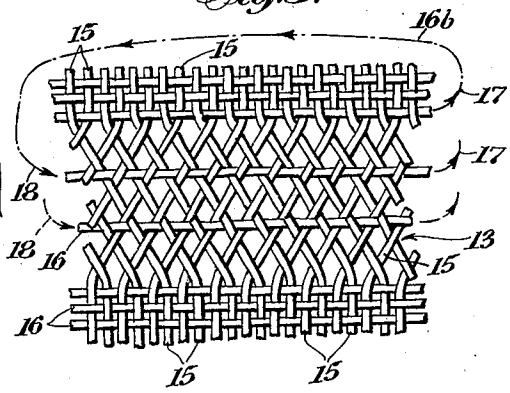


Fig. 5.

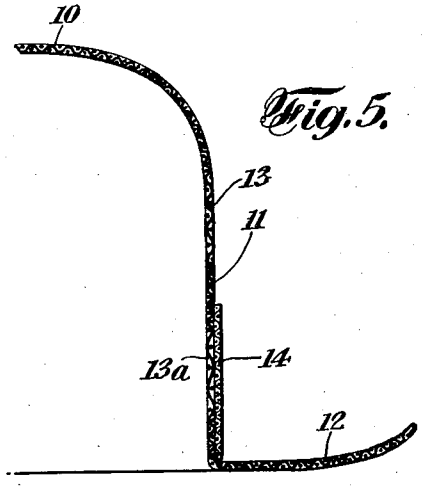
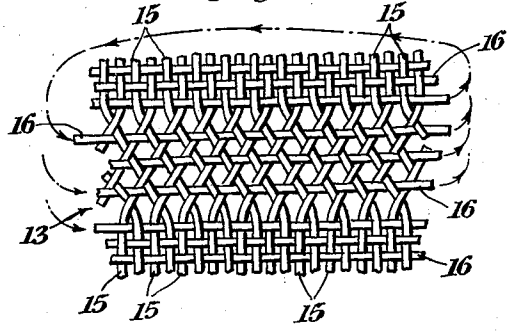


Fig. 4.



INVENTOR
John H. Tice Jr.
BY
Benjamin Kahn
ATTORNEY

April 24, 1934. J. H. TICE, JR 1,955,986

VENTILATED HAT

Filed Nov. 21, 1932 2 Sheets-Sheet 2

Fig. 6.

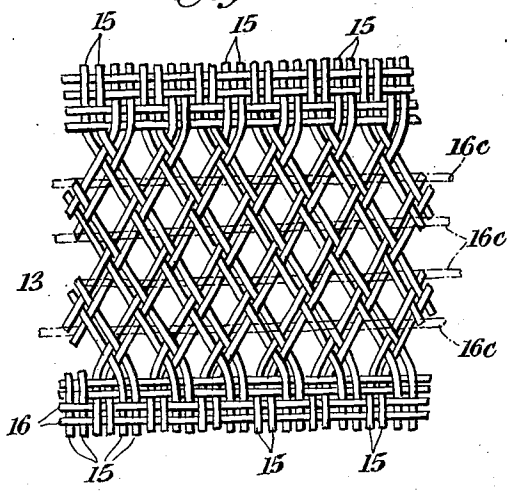


Fig. 7.

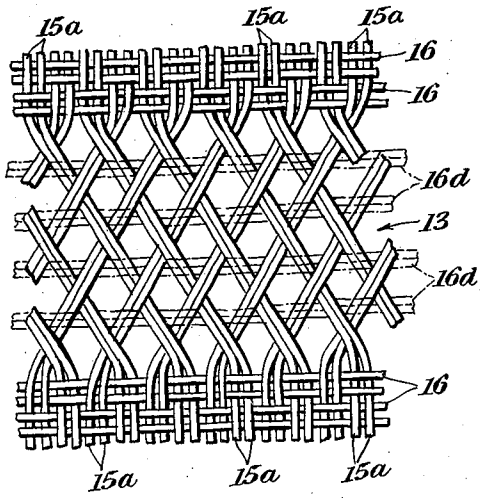


Fig. 8.

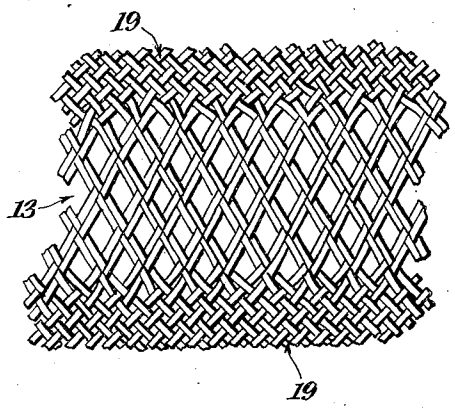
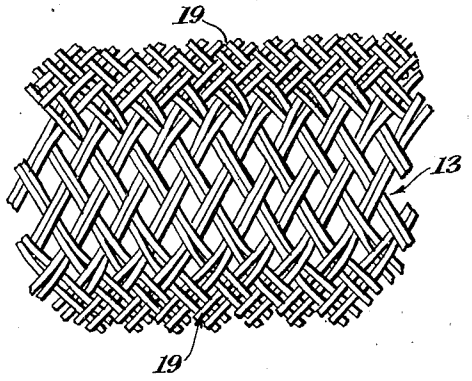


Fig. 9.



INVENTOR
John H. Tice Jr.
BY
Benjamin Tabin
ATTORNEY

Patented Apr. 24, 1934 1,955,986

UNITED STATES PATENT OFFICE

1,955,986

VENTILATED HAT

John H. Tice, Jr., New York, N. Y.

Application November 21, 1932, Serial No. 643,716

17 Claims. (Cl. 139—387)

This invention relates to new and useful improvements in hats and has more particular reference to a woven ventilated hat. The invention embodies the article and the process for its manufacture.

It is an object of this invention to construct a woven hat from one integral close weave but arranged with an opened woven portion constituting the ventilating area.

It is notoriously old for a hat to have a ventilating area of open weave but such areas are constructed by attaching a woven strip between separate sections constituting the hat. In other words the hat is not constructed from one integral weave. The old construction is more expensive than the construction contemplated by this invention and is not as good, first because of appearance and second because said attached parts after wear become loose. The attaching generally is accomplished by stitches which when old disintegrate.

The invention proposes the carrying out of the object previously mentioned by forming a hat with a plurality of interwoven continuous strands closely woven except at the ventilating area wherein the direction of the strands are obliquely changed from their natural direction to form an opened weave.

The invention still further proposes the carrying out of the object by an arrangment wherein a plurality of substantially parallel radial strands are arranged completely throughout the compass of the hat except at the ventilating area where these parallel strands have their direction changed to the oblique, and a single strand spirally closely woven with said parallel strands except at the ventilating area where the single strand extends transversely across, or spirally with the turns separated.

It is recognized that it is old to manufacture woven hats having a plurality of substantially parallel radial strands and a single strand spirally interwoven. But this invention departs from the old construction by the provision of a ventilating area obtained by manipulating the single strand in a manner so as to produce an open weave.

The invention still proposes the application of the object to different types of weave. For example, weaves in which the strands are at right angles or in which they are bias or/and in which the weave is one over one under, or two over two under, etc.

These important objects are attained by the novel, practical and simple construction and combination of parts hereinafter described and shown in the annexed drawings, constituting a component of this disclosure, and in which:—

Figure 1 is a perspective view of a hat constructed according to this invention.

Figure 2 is a fragmentary enlarged detailed portion of the hat shown in Fig. 1.

Figure 3 is a view similar to Fig. 2 but showing a modified construction.

Figure 4 is another view similar to Fig. 2 but showing a still further modified construction.

Figure 5 is a fragmentary vertical sectional view of the hat shown in Fig. 1.

Figure 6 is a view similar to Fig. 2 but showing a different modification.

Figure 7 is a view similar to Fig. 2 but showing a different modification.

Figures 8 and 9, are also views similar to Fig. 2, but each show a different modification.

The invention is particularly intended to apply to a woven hat having a top 10, a crown 11 and a brim 12. A portion of the crown 11 is formed with a ventilating area 13 distinguishing from the other portions of the hat merely in the fact that the weave is open. Or a plurality of ventilating areas may be used as shown in Fig. 1, as illustrative only, all of the areas being in the crown. Also the ventilating areas may be located between the top and the crown.

A hat band 14 is shown engaged around the hat covering the ventilating area 13*a*. This hat band must itself be of woven material having an open weave so as not to cut off the ventilation. The invention consists in producing the hat so that the ventilating area 13 forms an integral part thereof and is produced merely by obliquely changing the direction of certain strands in the hat.

In Fig. 2 a fragmentary portion of the hat crown shown in Fig. 1 has been illustrated. One specific form of the invention has been disclosed in which there are a plurality of substantially parallel strands 15 in the crown which extend from the center of the top of the hat radially along the top, then parallel along the crown, and then radially all the way to the edge of the brim. The drawings do not show the strands extending from the center of the top to the outer edge of the brim since this will be readily understood.

A single strand 16 is spirally interwoven with the strands 15 starting from the center of the top of the hat and finally terminating at the outer edge of the brim. Again, a complete disclosure of the spiral strand 16 is not shown, the figure being limited only to the manner in which the

single spiral strand traverses the ventilating area 13.

The adjacent parallel strands 15 are bent obliquely in opposite directions to each other as they traverse the ventilating area 13 and thereafter continue in substantially parallel formation. The single spiral strand 16 is shown to traverse the ventilating area 13 by having a portion 16' extending obliquely across the ventilating area preferably behind one of the oblique strands 15. The dot and dash lines 16*a* serve to show schematically the manner in which the single strand extends around and finally continues past the ventilating area by being interwoven with the parallel strands 15. It should be borne in mind that the ventilating area is produced by the formation of an open weave in a specific area, or specific areas, of the woven hat, but the ventilating area, or areas, is, or are, integral with the hat.

In Fig. 3 a modified form of the invention has been disclosed in which the single strand 16 is traversed across the ventilating area 13 in a modified manner. More particularly the single strand 16 is woven spirally across the ventilating area with the turns materially separated from each other. The dot and dash lines 16*b* indicate a schematic manner in which the single strand extends spirally across the ventilating area. At the portion where the single strand extends across the fragmentary portion of the hat shown in Fig. 1 the single strand is shown in full lines. The arrow 17 merely serves to indicate that the single strand extends around and connects up with the arrow 18 and so on through the ventilating area. Past the ventilating area the single strand continues in its spirally closely interwoven state.

In Fig. 4 a slight modification of the invention has been disclosed which is very similar to the form shown in Fig. 3, except that the single strand 16 is extended spirally through the ventilating area 13 but with the turns closer together. In Fig. 3 the turns were separated substantially one complete diamond opening from each other. The diamond openings referred to are those formed by the oblique strands 15. In Fig. 4 the single strand 16 is arranged so that there are two turns within each of the diamond openings.

In Fig. 5 is shown a fragmentary sectional portion of the hat shown in Fig. 1, and the ventilating area is schematically illustrated to show the opened weave. It should be noticed that the ventilating area is integral with the remaining portion of the hat.

In Fig. 6 another form of the invention has been disclosed which is also very similar to the form shown in Fig. 4 except that the parallel strands 15 are arranged in pairs, closely woven two over two under in the main portion of the hat with two turns of a single strand, and extending obliquely across the ventilating area in an interlocking manner. Each adjacent pair of parallel strands 15 are bent obliquely away from each other and singularly interwoven across the ventilating area. The single strand 16 may continue through the ventilating area as shown in Fig. 2, or may be interwoven with the interlocking strands 15 as indicated at 16*c* by dot and dash lines, which has been described in Fig. 3.

Fig. 7 shows a still further modified form which is very similar to the form shown in Fig. 6 except that the parallel strands 15*a* are arranged in groups of two with adjacent groups directed obliquely in opposite directions. Then each group of two is merely interwoven with the adjacent group of two, that is, the weave is of the type known as two over and two under. Furthermore, in this particular form there is a double strand 16*d* spirally interwoven. The complete details of the double strands 15*a* will not be given since it is readily understood. The path taken by these double strands is identical to the path taken by the single strands 15 as illustrated in Fig. 1. The continuous double strand 16*d* may be identically woven as indicated in Fig. 2, and as indicated by dot and dash lines, it may be woven identical to Fig. 4.

In Figs. 8 and 9 another modified form of the invention has been disclosed which shows its application to a different type of weave. Reference numeral 19 indicates a bias weave. First referring to Fig. 8 the ventilating area is produced by obliquely changing the natural direction of the strands in the bias weave 19. The strands are shown grouped with two strands in a group and each of the strands interwoven, that is, the weaving is of the type, one over one under, and interlocking across the ventilating area.

In Fig. 9 the arrangement is substantially identical except the weaving of the strands. These portions are woven, two over two under.

While certain preferred embodiments of this invention have been shown and described, it will be understood that changes in the form, arrangements, proportions, sizes and details thereof may be made without departing from the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent, is:—

1. A process for manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands and thereby forming a ventilating area, extending the single strand obliquely across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally to the edge of the hat.

2. A process for manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of a hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands thereby forming a ventilating area, extending the single strand obliquely across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally to the edge of the hat, the oblique portions of the strands through the ventilating area being woven with each other, of the type known as one over one under.

3. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of a hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely weaving the parallel strands thereby forming a ventilating area, obliquely weaving the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally to the edge of the hat.

4. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands

radially from the center of the top of a hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands thereby forming a ventilating area, spirally weaving the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally to the edge of the hat.

5. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the the center of the top of a hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area of diamond formations, spirally weaving the single strand across the ventilating area with one turn thereof within each diamond formed by the oblique strands, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally to the edge of the hat.

6. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area of diamond formations, spirally weaving the single strand across the ventilating area with two turns thereof within each diamond formed by the oblique strands, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally to the edge of the hat.

7. A process for manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area, the oblique formation of the parallel strands being arranged in groups in which each group constitutes a plurality of said strands, weaving the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally past the ventilating area to the edge of the hat.

8. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area, the oblique formation of the parallel strands being arranged in groups in which each group constitutes a plurality of said strands, and said strands being interwoven of the type one over one under, weaving the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally past the ventilating area to the edge of the hat.

9. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area, the oblique formation of the parallel strands being arranged in groups in which each group constitutes a plurality of said strands, and said strands interwoven of the type two over two under, weaving the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally past the ventilating area to the edge of the hat.

10. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area, the oblique formation of the parallel strands being arranged with adjacent strands bent in opposite directions, weaving the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally past the ventilating area to the edge of the hat.

11. A process of manufacturing a ventilated hat, consisting of arranging a plurality of strands radially from the center of the top of the hat and parallel along the crown thereof, weaving a single strand spirally starting from the center of the top of the hat, obliquely bending the parallel strands to form a ventilating area, the oblique formation of the strands being arranged in groups and adjacent groups directed in opposite oblique directions, extending the single strand across the ventilating area, arranging all the oblique strands parallel past the ventilating area, and continuing weaving the single strand spirally past the ventilating area to the edge of the hat.

12. In a woven hat having a ventilating area, a plurality of parallel strands in the crown extending from the center of the top, a single strand woven spirally with said parallel strands and starting at the center up to the ventilating area, said parallel strands being bent obliquely through said ventilating area, said single strand being extended through the ventilating area, said plurality of strands after the ventilating area being arranged parallel and said single strand after the ventilating area, being woven with the parallel strands to the edge of the hat.

13. In a woven hat having a ventilating area, a plurality of parallel strands in the crown extending from the center of the top, a single strand woven spirally with said parallel strands and starting at the center up to the ventilating area, said parallel strands being bent obliquely through said ventilating area, said single strand being extended through the ventilating area, said plurality of strands after the ventilating area being arranged parallel and said single strand after the ventilating area, being woven with the parallel strands to the edge of the hat, the oblique portions of said parallel strands being arranged with adjacent parallel strands bent in opposite directions.

14. In a woven hat having a ventilating area, a plurality of parallel strands in the crown extending from the center of the top, a single strand woven spirally with said parallel strands and starting at the center up to the ventilating area, said parallel strands being bent obliquely through said ventilating area, said single strand being extended through the ventilating area, said plurality of strands after the ventilating area being arranged parallel and said single strand after the ventilating area, being woven with the parallel strands to the edge of the hat, the oblique por-

tions of said parallel strands being arranged in groups and each adjacent group being bent in opposite directions.

15. In a woven hat having a ventilating area, a plurality of parallel strands in the crown extending from the center of the top, a single strand woven spirally with said parallel strands and starting at the center up to the ventilating area, said parallel strands being bent obliquely through said ventilating area, said single strand being extended through the ventilating area, said plurality of strands after the ventilating area being arranged parallel and said single strand after the ventilating area, being woven with the parallel strands to the edge of the hat, said single strand being disposed obliquely through the ventilating area and more particularly behind one of said oblique portions of one of the parallel strands.

16. In a woven hat having a ventilating area, a plurality of parallel strands in the crown extending from the center of the top, a single strand woven spirally with said parallel strands and starting at the center up to the ventilating area, said parallel strands being bent obliquely through said ventilating area, said single strand being extended through the ventilating area, said plurality of strands after the ventilating area being arranged parallel and said single strand after the ventilating area, being woven with the parallel strands to the edge of the hat, said single strand being extended spirally interwoven through the ventilating area with the turns of the spiral spaced from each other.

17. In a woven hat, having a top, crown and brim portions, and a ventilating area in the crown, a plurality of substantially parallel strands in the crown extending from the top along a portion of the crown, adjacent parallel strands continuing in opposite oblique directions thereby forming said ventilating area in said crown, said strands continuing across the brim, and a single strand being spirally closely interwoven with said strands, except at the ventilating area where the strands are openly interwoven.

JOHN H. TICE, JR.