(No Model.)

W. P. O'CONNOR.

HAT SHIELD AND VENTILATOR.

No. 402,182. Patented Apr. 30, 1889.

Fig. 1.

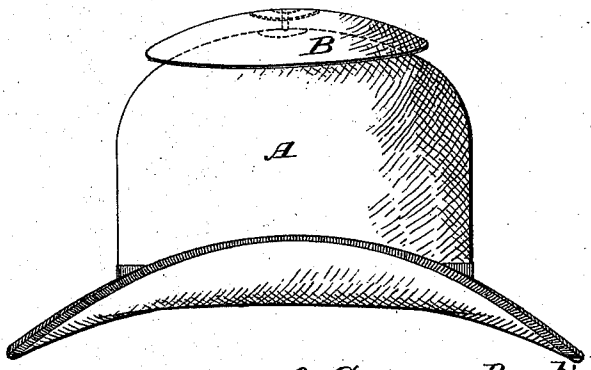


Fig. 4.

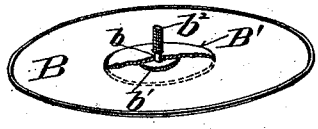


Fig. 2.

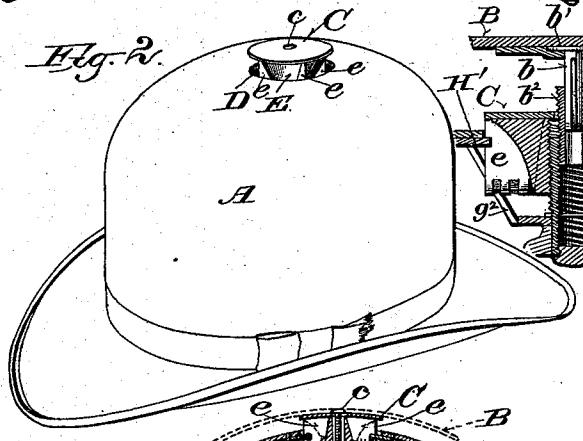


Fig. 3.

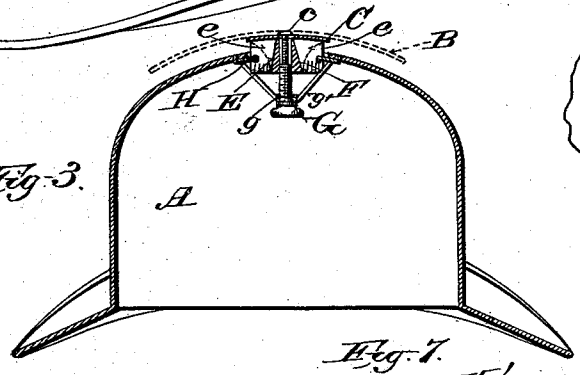


Fig. 9.

Fig. 5.

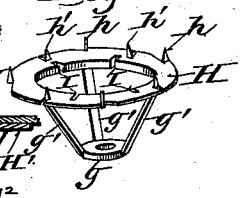


Fig. 6.

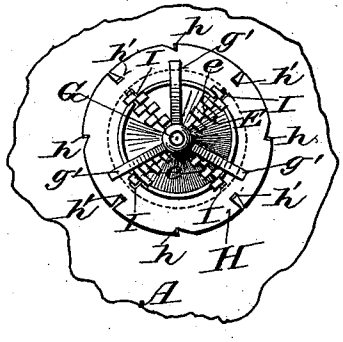


Fig. 7.

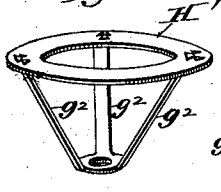


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM P. O'CONNOR, OF MILWAUKEE, WISCONSIN.

HAT SHIELD AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 402,182, dated April 30, 1889.

Application filed October 23, 1888. Serial No. 288,921. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. O'CONNOR, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hat Shields and Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The objects of my invention are to introduce fresh air into the crown of a hat when the same is on the head, to protect the head from the sun's rays, &c., and in the attainment of the foregoing ends to avoid mutilating or disfiguring the hat, to regulate as desired the quantity of air admitted into the hat, to prevent drafts upon the head, and to add unappreciably to the weight of the hat.

It consists, essentially, of an inverted-cone-shaped ventilator having laterally-projecting upright wings placed in an opening provided therefor in the crown of the hat; of means for raising and lowering said ventilator; of a shield having on its under side a vertical stem by which it is adjustably and removably attached to the hat, and of certain other peculiarities of construction and arrangement, hereinafter specifically set forth, and pointed out in the claims.

In the accompanying drawings like letters designate the same parts in the several figures.

Figure 1 is a side elevation of a hat to which my improvements are applied. Fig. 2 is a perspective view of the same, with the head-shield removed and the ventilator raised into working position. Fig. 3 is a vertical medial section of the hat and ventilator as shown in Fig. 2. Fig. 4 is a perspective view of the head-shield inverted. Fig. 5 is a perspective view of the ventilator-frame. Fig. 6 is a view of the under side of the ventilator. Fig. 7 is a perspective view of a modification of the ventilator-frame. Fig. 8 shows details of the same; and Fig. 9 is a vertical medial section, on an enlarged scale, of the ventilator, ventilator-frame, and of the head-shield support.

It is now generally believed and conceded that in many cases headache, insomnia, nervousness, baldness, and other disorders result from wearing close hats, and that these harmful results may be avoided by the introduction of fresh air into the hat around the head. I am aware that various devices for this purpose have been devised; but, so far as I am informed, they consist simply of perforations through the hat, or are so constructed as to necessitate their readjustment for any change of direction of the wind or external air-currents, and, in short, so far as I am aware, all the devices for the purpose heretofore in use are inadequate to effectually ventilate the hat.

A represents an ordinary hat, which may be of the customary shape and material. From the center of its crown a circular piece, C, is cut, which is attached to an inverted cone or conoidal piece, E, so as to project a short distance over and completely around the edge of the latter. The cone E is preferably formed of wood or some light material, or may be pressed out of sheet metal with concaved sides, as shown in Fig. 9. It has a central vertical threaded perforation for the reception of the adjusting-screw G, as shown in Figs. 3 and 9.

To the inclined sides of the cone E are attached the laterally-projecting wings *e e*, preferably four in number, set at right angles to each other, as seen in Fig. 6. For the purpose of breaking and diffusing the ingoing air-currents, these wings *e e* are slit vertically through their lower edges, and the sections thus formed are bent alternately in opposite directions, as shown in Figs. 6 and 9.

A spider-frame composed of a ring, H, and legs g' g', united at their converging ends to an eye, *g*, is attached in an inverted position to the inside of the hat around the opening in the crown, as shown in Fig. 3. The adjusting-screw G is held and turns in the eye *g* of said frame, and the ring H of said frame is secured by suitable means to the inside of the crown of the hat around the circular opening therein, and projects a short distance toward the center of the opening past its edges, so as to form a seat for the overhanging edge of the circular top C of the ventilator when the same is closed, and at the same time to hold the top of the ventilator flush with the crown of the hat and to break the

joint between them. The outer edges of the wings *e e* pass through notches I I in the inner edges of the ring H, as shown in Fig. 6, and the ventilator is thereby prevented from turning with the adjusting-screw G in raising and lowering it.

Referring to Figs. 5 and 6, the ring H, forming a part of the ventilator-frame, is shown as made of metal with points *h h'* cut and turned in its outer edges for fastening the same to the haf. Some of the points are cut so as to fold inwardly toward the center of the ring, while others are cut so as to fold transversely thereto over the material of the hat pierced by them. The entire frame, including the ring, legs, and eye, may be cut and pressed in one piece out of sheet metal. I prefer, however, to employ a ring, H', of felt, leather, or some similar material in which the legs g^2 g^2 of the spider-frame are secured by slitting their ends, passing them through cuts in the ring, and turning the points over it in opposite directions, as shown in Figs. 7 and 8. The ring H is then glued or cemented in place to the inside of the hat.

B represents the head-shield, which may be made out of any suitable light material, and is preferably shaped to conform to the crown of the hat. To the center of the under side thereof is attached a longitudinally-slotted stem, *b*, the head *b'* of which is interposed and held between said shield and a perforated piece, B', of felt or other suitable material, glued or otherwise attached thereto, as shown in Figs. 4 and 9.

The stem *b* is inserted and fits snugly in an externally-threaded sleeve, b^2, and the adjusting-screw G is made tubular, and is threaded on the inside to receive and work with the screw-threaded sleeve b^2, as shown in Fig. 9. The stem *b* is held from turning in the sleeve b^2 by a pin, b^3, secured in said sleeve and passing transversely through the slot in said stem. The stem *b* may be thrust entirely into the sleeve b^2, and the latter screwed down by turning the shield B snugly against the top of the ventilator, as indicated by dotted lines in Fig. 3. In this position the shield is raised and lowered with the ventilator by means of the screw G. It may also be adjusted independently of the ventilator by drawing the stem *b* out of or thrusting it into the sleeve b^2, and by screwing said sleeve in or out when a greater range of adjustment is desired, as illustrated in Fig. 9.

When not wanted, the shield can be readily removed from the hat and laid aside or drawn down snugly to the ventilator and upon the crown of the hat, when the ventilator is closed. In this case it re-enforces the crown of the hat and serves to protect and keep the head warm. The opening *c* in the top of the ventilator for the reception of the stem of the shield may be stopped, when the shield is removed, by a plug or button, N, which is inserted when the shield is in use in the lower end of the screw G, as shown in Fig. 9. The shield may be made of any desired size, of various materials, and of any configuration, ornamental or otherwise.

My improved ventilator operates as follows: When raised, so as to project more or less above the crown of the hat, air-currents striking the cone E on any side are deflected by it and its laterally-projecting wings into the hat and broken up by the irregular lower edges of said wings and the ventilator-frame, which prevent the concentration of the incoming air at any particular point. The air escapes at the same time from the hat through the openings on the opposite or leeward side of the ventilator from which the current is diverted, and thorough circulation is thus effected.

I claim—

1. The combination, with a hat having an opening in the center of the crown, of a ventilator placed in said opening and composed of an inverted cone with laterally-projecting upright wings extending above and below said opening when the ventilator is in working position, substantially as and for the purposes set forth.

2. The combination, with a hat having an opening in the crown, of a vertically-adjustable ventilator placed in said opening and composed of an inverted cone with laterally-projecting upright wings, and means for raising and lowering said ventilator, whereby the size of the aperture around the same is varied or the opening is entirely closed, substantially as and for the purposes set forth.

3. The combination, with a hat having an opening in the crown, of a ventilator placed in said opening and composed of an inverted cone, and laterally-projecting wings having their lower edges slit and bent in opposite directions, substantially as and for the purposes set forth.

4. The combination, with a hat having an opening in the crown, of a ventilator placed therein and composed of an inverted cone with laterally-projecting upright wings, which engage notches in the edge of said opening and serve as guides for the ventilator, and means of adjusting said ventilator vertically, substantially as and for the purposes set forth.

5. The combination, with a hat having an opening formed by the removal of a piece from the top of the crown, of a ventilator placed in said opening and composed of an inverted cone, to the top of which is attached, so as to project over its edges, the piece removed from the hat, and of upright wings projecting laterally from said cone, a ring attached to the inside of the hat and projecting inwardly past the edges of the opening therein, so as to form a seat for the overhanging top of said cone when the ventilator is closed, and means for adjusting said ventilator vertically, substantially as and for the purposes set forth.

6. The combination, with a hat having an

opening in the top of the crown, of a ventilator placed in said opening and serving as a shield-support, and a shield having a central stem on its under side which is removably attached to said ventilator, substantially as and for the purposes set forth.

7. The combination, with a hat having a support carrying a vertical socket in the center of the crown, of a shield shaped to conform to the crown of the hat and provided on the under side with a central vertical stem, which is held adjustably in said socket, whereby the shield may be set at different heights above the crown, brought snugly down against the crown, or removed from the hat, as desired, subscantially as and for the purposes set forth.

8. The combination, with a hat having an opening in the crown, of a vertically-adjustable ventilator placed in said opening, and a shield having a telescoping stem by which it is attached to said ventilator over the crown of the hat, so as to be capable of vertical adjustment with and independently of said ventilator, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM P. O'CONNOR.

Witnesses:
CHAS. L. GOSS,
M. E. BENSON.