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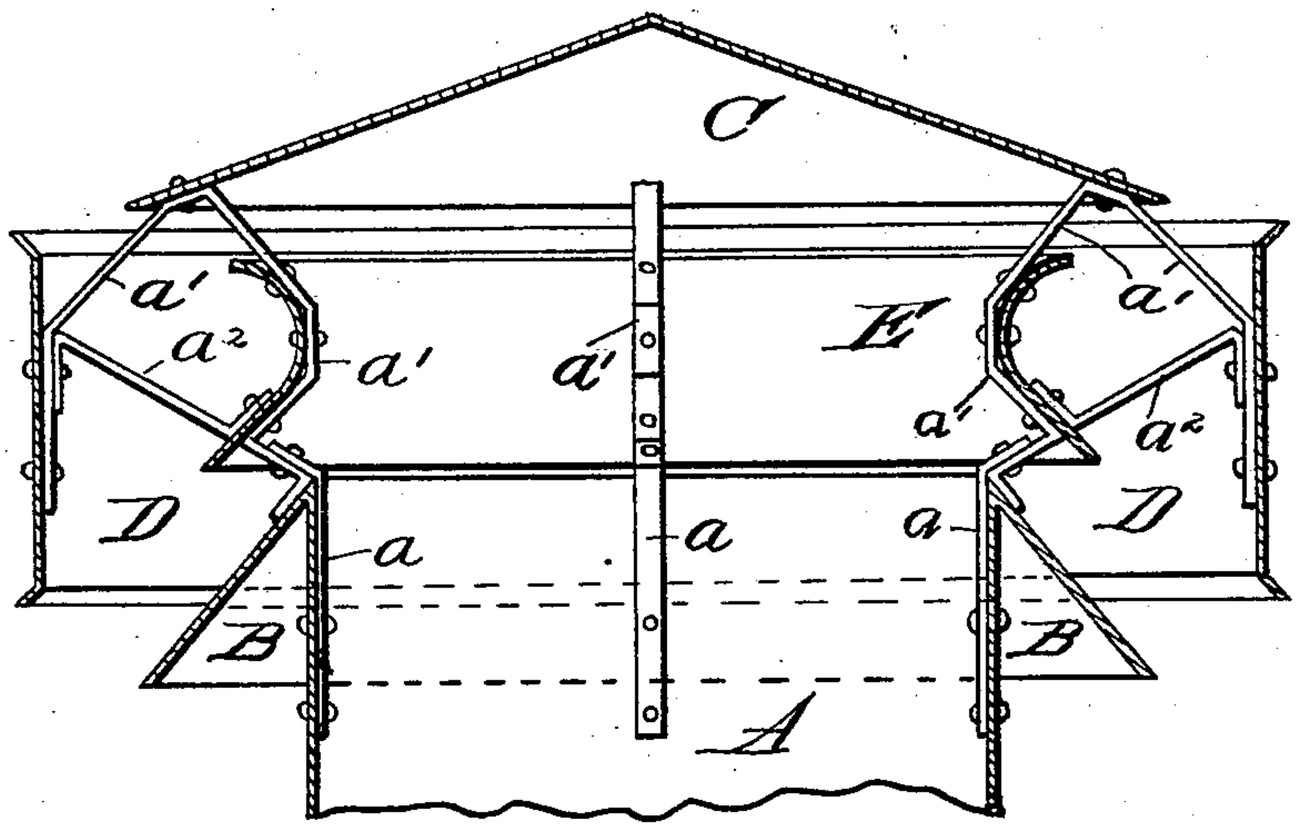
G. DOWMAN.

COWL.

(Application filed Jan. 14, 1901.)

(No Model.)



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GEORGE DOWMAN, OF ATLANTA, GEORGIA.

COWL.

SPECIFICATION forming part of Letters Patent No. 681,877, dated September 3, 1901.

Application filed January 14, 1901. Serial No. 43,147. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DOWMAN, a citizen of the United States of America, and a resident of Atlanta, in the county of Fulton and State of Georgia, have made a certain new and useful Cowl; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to the class of ventilators which are placed in roofs, &c., for carrying away foul air, fumes, and the like from the interior of buildings, the object of the invention being to so construct such a device that the suction or vacuum creating power of the wind passing into the cap or cowl thereof will be increased and the efficiency of the ventilator be thereby improved, as well as increasing the weatherproof qualities thereof, the details of all of which will be hereinafter fully specified, and shown in the accompanying drawings, in which a section of the device vertically and centrally is shown.

A is the flue, and B is a petticoat, conical in form, as usual, and secured to the upper end of the said flue, extending downwardly and outwardly in flaring form.

C is a conical cap supported from the flue in some suitable manner concentric with and some distance above the upper end thereof.

D is a fender-band which surrounds the upper end of the flue A, its upper edge lying about even with the lower level of the cap C and its lower edge lying below the upper end of the said flue A and above the lower edge of the petticoat B. This fender-band is considerably larger than the flue, indeed larger than the major diameter of the conical petticoat B, and the cap C is of such diameter that there is a space left between the edge thereof and the said fender-band. The elements described to this point are substantially those of the best ventilators now manufactured, such ventilators differing solely in some additional elements to these described fundamental elements. The deflector-ring E, forming my novel addition to the state of the art, consists of an annularly-bent curved channel, the annulus so formed being smaller in diameter in its middle and flaring toward both edges from about said middle and being seated so that the lower edge is substantially the same distance from the upper or outer side of the petticoat that the upper edge is from the cap C. It is preferable that the middle portion of said annulus should be curved in section, as it affords less resistance to the wind, being guided or directed thereby, and the angle of the lower flare is preferably about parallel to the petticoat, while the angle of the upper flare should be directed to the outer edge of the cap C, so as to direct the air toward the opening between the cap and fender-band, as well as deflect any water that might come into said opening in a driving rain. Air will follow the circumference of this annulus when it is not directed outwardly through said opening, escaping from the opposite side to its point of entry and assisting in the creation of a vacuum. Air guided by the ring (it having come into the ventilator-top on the windward side between the fender-ring D and the petticoat B) either takes the direction and produces the result just described or it is directed upwardly through the opening between the said fender-ring and the cap C and tends to produce a vacuum as it is driven past the opening between the annulus E and the cap C. The petticoat directs the air, as usual in this class of devices, the air-currents in the surrounding atmosphere being usually upward. A downward gust of air will be guided in the same manner and will tend also to produce a vacuum in the chamber just at the upper end of the flue A, being directed by the annulus E after it enters by way of the space between the fender-band and the cap C outwardly through the space between the fender-band and the petticoat, passing the opening between the annulus E and the petticoat B. This device is also adaptable to the purpose of preventing rain, &c., from entering. The various parts of this device are tied together and supported by means of certain braces, which I will now proceed to describe. The fundamental supports *a* are secured to the upper end and inner sides of the flue A, their upper ends being bent outwardly and upwardly at an angle. To each of these ends is secured

one end of a correlative main brace a', which preferably is provided with a foot resting upon the outer surface of the petticoat B, said brace extending thence to the lower edge of the annulus E, thence along its inner surface, (to which it is secured,) and to the lower side of the cap near its edge, whence it extends downwardly and outwardly and is riveted to the inner side of the fender-ring. The strut a^2 extends from the inner side of the fender-ring to the lower edge of the annulus E.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a cowl, a flue and a cap located above the upper end thereof, a fender-ring surrounding them with air-passages intervening between the upper edge of said fender-ring and the outer edge of said cap and between the upper end of said flue and the lower edge of said fender-ring and an annulus located within the said fender-ring below said cap and above said flue with air-passages between its upper and lower edges and said cap and flue respectively and between said annulus and fender-ring.

2. In a cowl, a flue and a cap located above the open end thereof, a fender-ring surrounding them with air-passages intervening between the upper edge of said fender-ring and said cap and between the upper end of said flue and the lower edge of said fender-ring and an annulus flaring larger from about its middle to its upper and lower edges and located within said fender-ring below said cap and above said flue with air-passages between its upper and lower edges and said cap and flue respectively and between said annulus and fender-ring.

3. In a cowl, a flue and a cap located above the open end thereof, a fender-ring surrounding them with air-passages intervening between the upper edge of said fender-ring and said cap and between the upper end of said flue and lower edge of said fender-ring and an annulus flaring larger from about its middle to its upper and lower edges and located within said fender-ring below said cap and above said flue with air-passages between its upper and lower edges and said cap and flue respectively and between said annulus and fender-ring, the upper flared portion of said annulus being directed at an angle toward the air-passage between the said cap and fender.

4. In a cowl, a flue and a conical petticoat on the upper end thereof flaring downwardly and outwardly from its upper edge where it joins the said flue, a cap located above the open end of said flue, a fender-ring surrounding them with air-passages intervening between the upper edge of said fender-ring and said cap and between the upper end of said flue and the lower edge of the said fender-ring, and an annulus flaring larger from about its middle to its upper and lower edges and located within the said fender-ring below said cap and above said flue with air-passages between its upper and lower edges and said cap and flue respectively and between said annulus and fender-ring, the lower flared portion of said annulus lying substantially above and parallel to the aforesaid petticoat.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

GEORGE DOWMAN.

Witnesses:
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D. E. MONCRIEF.