

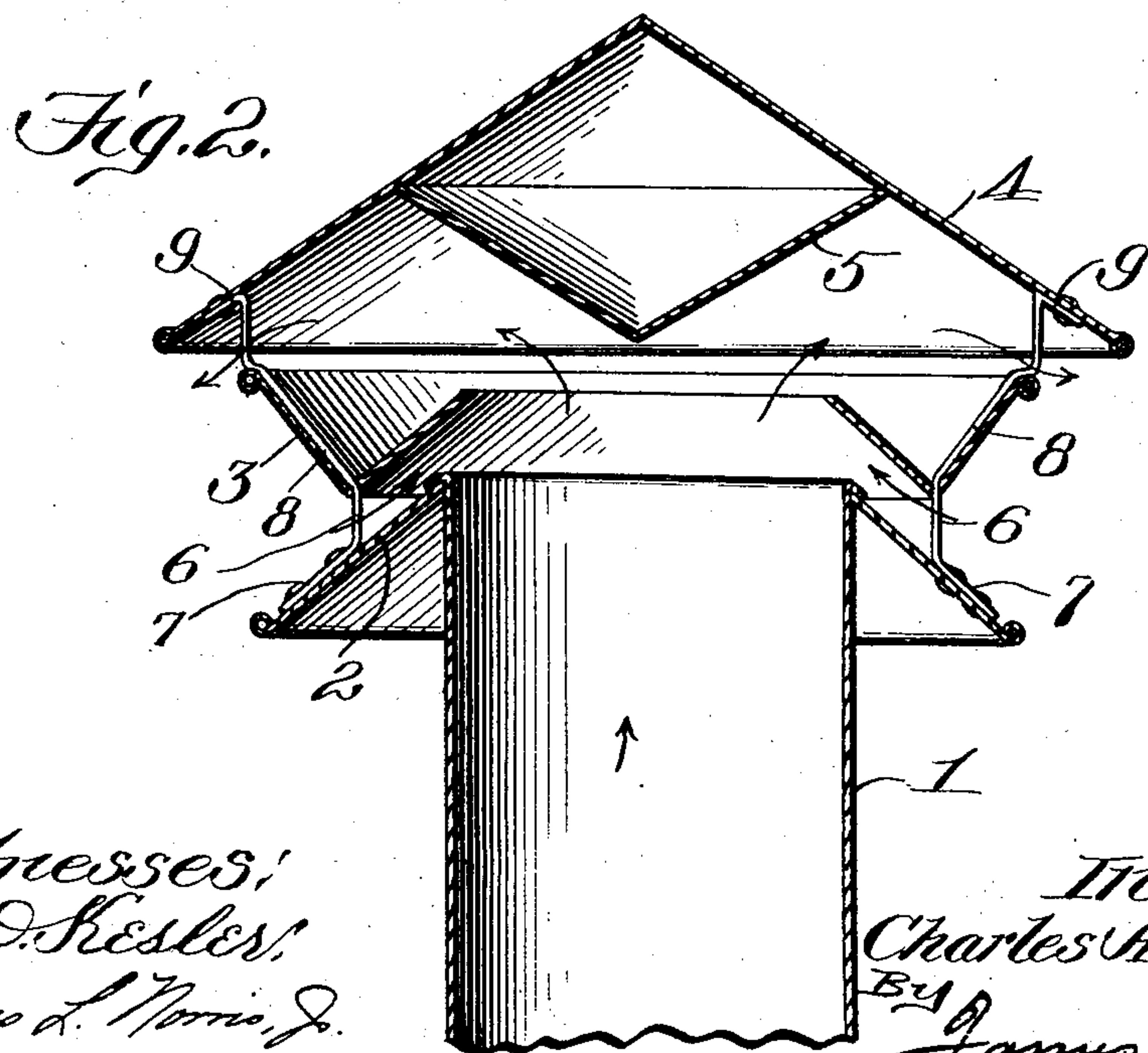
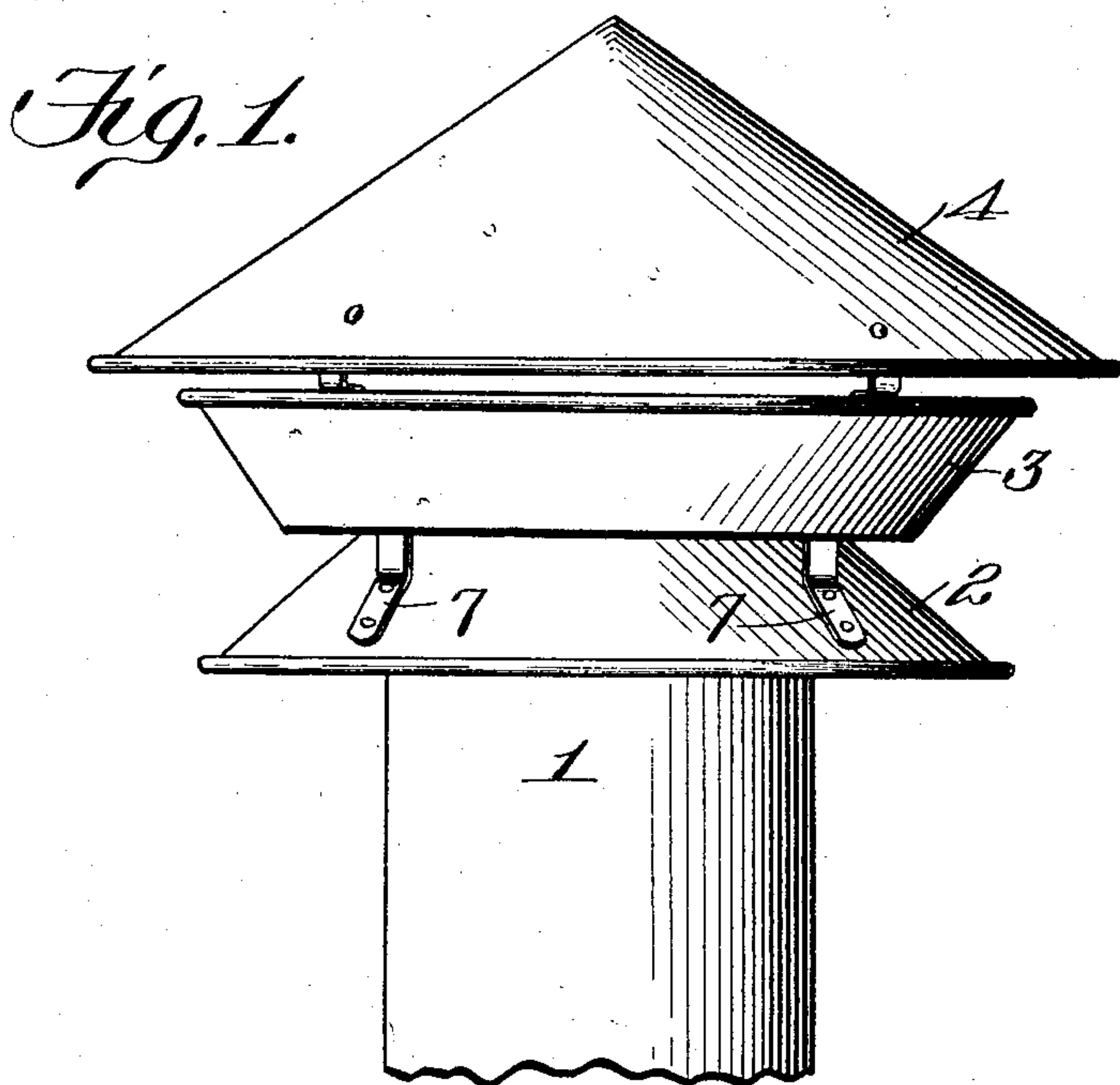
No. 771,449.

PATENTED OCT. 4, 1904.

C. A. WITHERS.
VENTILATOR.

APPLICATION FILED MAY 22, 1903. RENEWED MAY 17, 1904.

NO MODEL.



Witnesses:
C. D. Kesler,
James L. Norris, Jr.

Inventor
Charles A. Withers
By James L. Norris,
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES A. WITHERS, OF AUGUSTA, GEORGIA, ASSIGNOR TO INTERNATIONAL VENTILATOR AND DEFLECTOR COMPANY, OF WASHINGTON, DISTRICT OF COLUMBIA, A CORPORATION OF THE DISTRICT OF COLUMBIA.

VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 771,449, dated October 4, 1904.

Application filed May 22, 1903. Renewed May 17, 1904, Serial No. 208,473. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. WITHERS, a citizen of the United States of America, residing at Augusta, in the county of Richmond and State of Georgia, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

This invention relates to certain new and useful improvements in ventilators, and is particularly adapted for use in connection with any inclosed space where it is desirable to withdraw foul or vitiated air.

The object of the invention is to provide new and novel means, as hereinafter more specifically set forth, and illustrated in the accompanying drawings, which is adapted when in use for creating an induced current of air therethrough, thereby withdrawing the foul, vitiated, or heated air from the structure to which the ventilator is attached.

The invention further aims to construct a ventilator which shall be extremely simple in its construction, strong, durable, efficient in its use, and comparatively inexpensive to set up.

With the foregoing and other objects in view the invention consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claim hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like reference characters denote corresponding parts throughout both views, and in which—

Figure 1 is an elevation of the ventilator, its shaft broken away; and Fig. 2 is a sectional elevation thereof.

Referring to the drawings by reference characters, 1 denotes the body portion or shaft of the ventilator, which is preferably cylindrical in contour and communicates with the interior of the structure to which the ventilator is attached. The shaft 1 may communicate with the interior of the structure which is to be ventilated by a suitable conduit, (not shown,) the shaft or body portion 1 being at-

tached to the conduit in any suitable manner. At the top of the shaft 1 and surrounding the same, as well as being secured to the shaft in any suitable manner, is a substantially truncated-cone-shaped collar 2, the inclination of the collar being such that it will extend inwardly and upwardly at an inclination and terminate at its inner end against the top edge of the shaft or body portion 1. Superposed above the collar 2 is V-shaped collar 3, the collar 3 being supported, in a manner as hereinafter referred to, a suitable distance above the collar 2 and top of the shaft 1, and the inner section of the collar 3 projects over the mouth of the body portion or the shaft 1. The collar 3 is formed with what may be termed "two sections," the outer section extending downwardly and inwardly at an inclination and the inner section extending inwardly and upwardly at an inclination. The collars 2 and 3 are adapted to form an air-passage the walls of which are inclined and the inner or discharge end thereof contracted. Supported above the collar 3 in a manner hereinafter referred to is the cap or hood of the ventilator, which is indicated by the reference character 4 and is substantially cone-shaped in contour and its lower portion of such diameter as to project over the collars 2 and 3. The inner face of the cap or hood 4 has secured thereto an inverted-cone-shaped deflector 5, which is arranged directly over and a suitable distance above the mouth of the shaft or body portion 1. The collar 3 and hood or cap 4 are supported and secured in their desired positions by means of a series of supporting-standards 6. These standards are secured at their lower ends with the outer face of the collar 2, as at 7, and extend upwardly and through the collar 3 and secured to the inner face of the outer section of said collar 3, as at 8, and then extend upwardly and are secured to the inner face of the cap or hood 5, as at 9. Other means than that as shown may be employed for securing and retaining the collar 3 and hood or cap 4 in position; but that as shown is the preferred one.

The passage of the air-currents is indicated by the arrows in Fig. 2.

The operation of the ventilator is as follows: The wind passing through the air-passage 5 formed by the collars 2 and 3 is compressed in the said passage, whereby its power and speed will be increased and it produces a powerful suction at the mouth of the shaft or body portion 1, whereby an induced upward current of air is created in the body portion 10 which communicates with the inclosed space being ventilated, thereby withdrawing the foul, vitiated, or heated air therefrom. The air will be forced against the deflector 5 and 15 deflected out between the hood or cap 4 and collar 3, as indicated by the arrow in Fig. 2. It will be evident that the hood or cap 4 will prevent rain, snow, sleet, or other foreign matter entering the shaft or body portion 1, 20 and it will also be evident that the hood 4 can be dispensed with and the ventilator operated in a satisfactory manner.

It is thought the many advantages of my improved ventilator can be readily understood 25 from the foregoing description, taken in connection with the accompanying drawings, and it will furthermore be evident that changes, variations, and modifications can be resorted to without departing from the spirit 30 of the invention or sacrificing any of its advantages, and I therefore do not wish to restrict myself to the details of construction hereinbefore described and as shown in the accompanying drawings, but reserve the right

to make such changes, variations, and modifications as come properly within the scope of the protection prayed. 35

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is— 40

A ventilator comprising a shaft, a truncated-cone-shaped collar connected to the top thereof, a collar substantially V-shaped in cross-section arranged above said truncated-cone-shaped collar and having the inner section 45 thereof projecting over the mouth of the shaft, a cone-shaped hood arranged above said V-shaped collar and of a greater diameter than the outer section of the V-shaped collar and said truncated-cone-shaped collar, said hood 50 having an inverted-cone-shaped deflector secured to the inner face thereof, and a series of supporting-standards connected at their lower ends to the upper face of said truncated-cone-shaped collar, extending through and secured to the inner face of the outer section of the V-shaped collar and extending upwardly 55 in said hood and secured at their upper ends to the inner face of the hood, substantially as herein shown and described. 60

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES A. WITHERS.

Witnesses:

N. L. BOGAN,
GEO. W. REA.