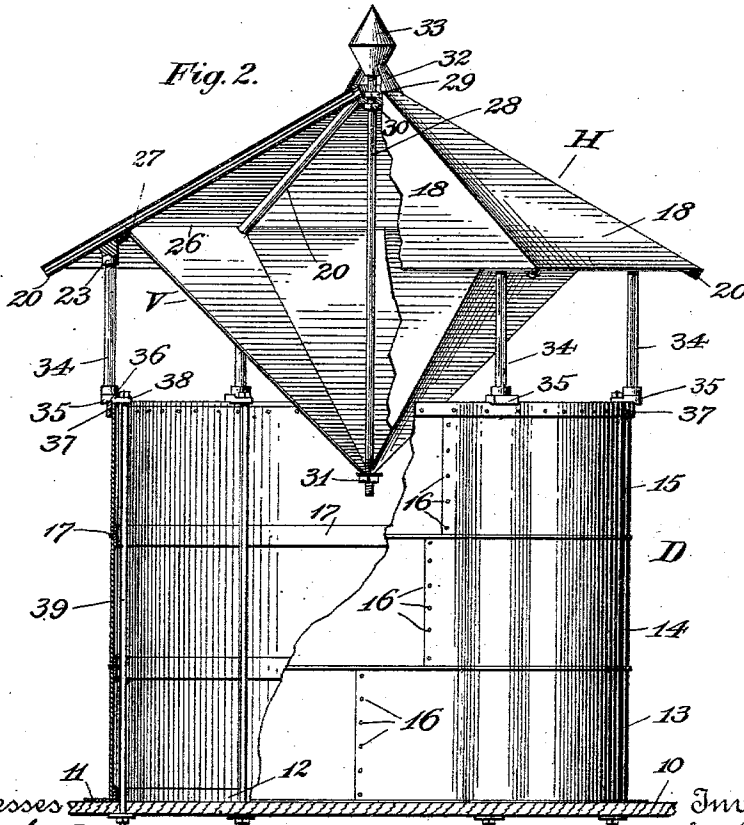
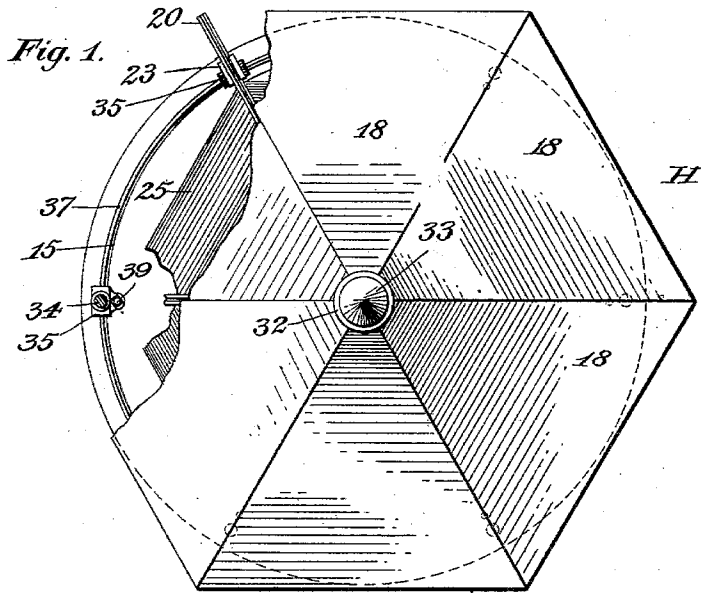


J. O. STANLEY.
VENTILATOR.

(Application filed Apr. 29, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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J. O. STANLEY.
VENTILATOR.

Application filed Apr. 29, 1902.

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

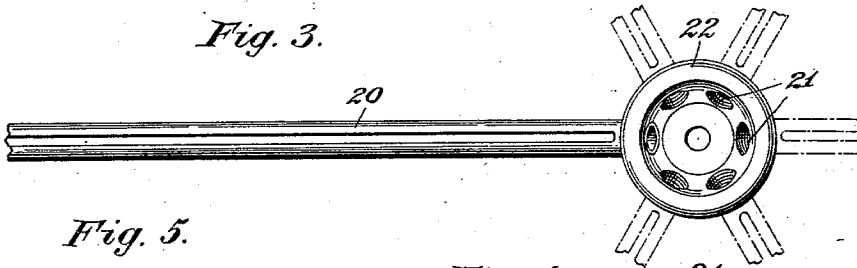


Fig. 5.

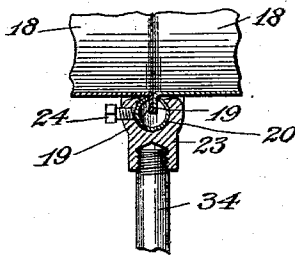


Fig. 4.

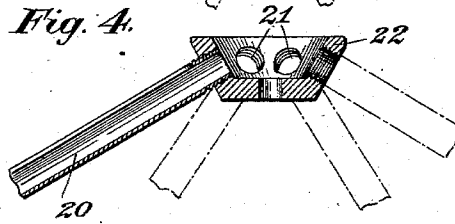


Fig. 6.

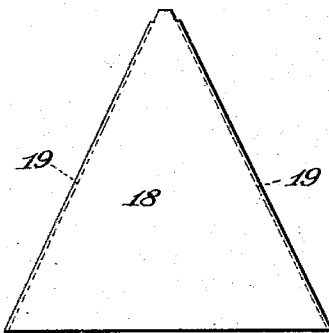


Fig. 7.

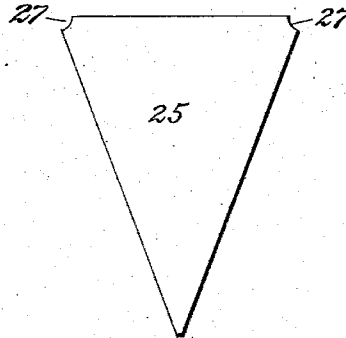
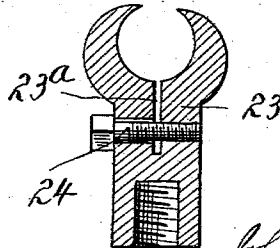


Fig. 8.



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UNITED STATES PATENT OFFICE.

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VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 715,169, dated December 2, 1902.

Application filed April 29, 1902. Serial No. 105,220. (No model.)

To all whom it may concern:

Be it known that I, JOHN O. STANLEY, a citizen of the United States of America, and a resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Ventilators, of which the following is a full, clear, and exact description.

This invention relates to ventilators, and more especially to that class thereof which are used for ventilating large buildings; and it has for one of its objects the provision of a device of this character which may be assembled in a convenient manner and which, on the other hand, may be taken apart and packed in compact form ready for shipment.

My invention has, furthermore, for its object the provision of means whereby the several component elements of the ventilator may be assembled in such a manner as to render the whole structure when built up a practically unitary device which possesses great strength and the parts of which will be comparatively light in weight.

In the preferred form thereof shown my improved ventilator comprises a cylindrical shell or casing which is substantially cylindrical in form and which may be carried to any desired height, this casing being surmounted by a ventilator-cap comprising a deflector and a hood, both of which parts are held at some distance above the upper opening of said casing, as is common in devices of this character.

It should be stated at this time that it is not the object of my present invention to construct a ventilator the efficiency of which shall be in any way greater than that of this class of ventilators in common use, since it is my special aim to construct a ventilator possessing the generic features of efficiency and which shall be adapted to be readily taken apart, and the component parts of which may be formed into packages of small dimensions, so that not only little room will be occupied when thus packed for shipment, but that, furthermore, such packages may be easily handled and transported and, furthermore, the several pieces may be easily assembled.

In the drawings, in which similar characters denote similar parts, Figure 1 represents a top view of a ventilator constructed in ac-

cordance with my invention. Fig. 2 is a side view thereof partially broken out to disclose the construction and organization of some of the component parts. Figs. 3 to 5, inclusive, illustrate in detail some portions of the device. Fig. 6 is a detail view of one of the sections comprising the hood, and Fig. 7 illustrates the preferred form of the deflector-sections. Fig. 8 is a detail sectional view of a modified form of bracket for the support for the hood-sections.

Inasmuch as the height of the ventilator above the roof of a building may be varied according to the general requirements, it should be understood that the number of sections constituting the casing portion of my improved ventilator may be changed without in any way affecting the spirit of my invention. Likewise I wish to state at this time that it is immaterial what the number of the several sections of which the hood or the deflector are composed may be, since the principal object is to render the structure easy to erect or manipulate when ready for shipment.

In the drawings, 10 denotes a roof, to which an annular plate 11 may be attached by any convenient means. This plate 11 has an upwardly-extending flange 12, the diameter of which is such as to fit into the lowermost section 13 on the ventilator-casing, (indicated in a general way by D.)

In Fig. 2 of the drawings the casing D is shown comprising three sections 13 14 15, all of which are preferably cylindrical in form and, if desired, may be made so as to telescope one into the other instead of being the same in size, as shown in this figure. The sections 13 14 15 are preferably formed of sheet-metal strips the ends of which are overlapped and joined—as, for instance, by screws or bolts (indicated at 16)—so that when required these bolts may be removed and each cylindrical section may be flattened out for packing and shipment.

In order to render the casing D a rigid structure, I preferably interpose between said sections thereof annular members 17, shown herein substantially T-shaped in cross-section, and the outer flange of which serves as a member against which any two adjacent sections may abut, as will be readily under-

stood, and the sections may be directly secured to said annular members in any suitable manner, if so desired.

Supported above the casing D and at a proper distance therefrom is a deflector V, mounted below but in contact with a hood H, the latter serving as a roof and protection against rain, &c., entering the building.

Referring first to the hood H, it will be seen that the latter is composed of a plurality of sections 18, which are substantially triangular in shape and the sides of which are turned downward to form flanges 19, adapted to enter hood-supports 20, which may be channeled to receive said flanges 19 and which are preferably tubular in cross-section and are provided in their upper surfaces with slots of sufficient width to receive the adjacent flanges of an adjacent pair of hood-sections, so that any water which may find its way between said flanges may be conducted away from the ventilator by passing along the tubular support 20, which may thus constitute a gutter. The supports 20 are preferably screw-threaded at their upper ends to enter correspondingly-formed apertures 21 in a crown member 22, disposed near and for supporting the upper ends of said hood-supports, this crown member being preferably unitary and of sufficient size to receive all of the hood-supports, which will thus extend therefrom radially. Near their lower ends the hood-supports 20 are preferably held in brackets 23, adapted to receive said supports and grooved at their upper sides to permit the flanges 19 of the hood-section to pass therethrough and into the support 20.

Means are provided for clamping the supports and the hood-sections firmly in place, these means comprising in the present instance bolts 24, (see Fig. 5,) which are screw-threaded in the brackets 23 and tend to contract said tubular hood-supports sufficiently to clamp the flanges entering said supports together.

Coöperative with the hood H and held in contact therewith is a deflector V, formed in the shape of an inverted cone and also comprising a plurality of preferably triangular sections 25, having their bases 26 adjacent the hood-sections 18 and having their base corners cut away, as shown in 27, (see Fig. 7,) to fit around the hood-supports 20.

The deflector-sections 25 will rest with their corners against stop-faces 27, formed on the brackets 23, while their lower ends or apexes are brought together and in contact with a deflector-support 28, consisting in the present instance of a rod attached to the crown member 22 and adjustably held therein—as, for instance, by nuts 29 and 30, respectively. The lower end of the rod 28 is screw-threaded to receive a nut 31, whereby all the sections 25 are positioned relatively to the hood and are forced upward and against the under side of said hood-sections 18, and, if desired, any suitable cap for retaining the sections 25 in

contact with the rod 28 may be employed in addition to the nut 31.

While it has been clearly described in what manner the hood-sections 18 are held near their lower ends in the supports 20, means are provided for maintaining also the upper ends of said sections in proper position and in contact with said supports, these means comprising in the present instance a cap or guard 32, preferably conical in section and surmounting all of the hood-sections and the crown member and centralized relatively to the deflector-support 28, and consequently to the crown member 22—as, for instance, by a nut 33 in screw-threaded engagement with the rod 28—thus constituting a finial for the ventilator.

In order to retain the deflector at proper distance from the mouth or top of the casing, I preferably employ a series of posts 34 in screw-threaded engagement with the brackets 23 above mentioned and having base members 35 grooved at their under side, as shown in 36, to fit over the top edge of the uppermost section 15 of the ventilator-dome D, this edge being preferably reinforced by a band 37, riveted or otherwise secured to said section 15. Each of the base members 35 may be provided with an ear 38 for receiving a bolt 39, whereby not only said base members are held on the member adjacent 15, but whereby, furthermore, all the casing-sections may be drawn together to form a rigid structure even if the individual sections are not bolted or otherwise secured to the annular members 17, above mentioned.

The manner of securing the bolts 39 may be varied, the construction shown in Fig. 2 of the drawings illustrating said bolts secured directly to the roof of the building, and it should of course be understood that said bolts may be secured at their lower ends to the plate 11 without in any way departing from the spirit of my invention.

The operation of assembling the several components of my improved ventilator is extremely simple and is as follows: It being supposed that the plate 11 is in position and firmly fastened to the roof 10, the dome-section 13 is first placed in position, whereupon the first annular member 17, the section 14, the second interposed member 17, and the section 15 are successively superposed in the order named. The hood-supports 20 are assembled with the crown member 22, and the brackets 23, with the posts 34, are positioned on the supports 20 until the distance between said brackets will be equal to the length of the base-line 26 of the deflector-sections. The hood-sections 18 may now be placed in position, with the flanges 19 projecting into the slots of the tubular supports 20, whereupon the bolts 24 may be tightened to render the structure rigid at this point. The collar or guard 32 is now placed over the rod 28 and the nut 33 turned to force said guard 32 outward until the plates 18 are firmly in con-

tact with the supports 20 at their outer ends. The deflector-sections may now be put into place and the nut 31 turned until all of the sections 25 are fixed in position, and finally the bolts 39 will serve to firmly attach the entire structure to the roof 10.

It is of course obvious that the method just described of assembling the various parts may be modified according to the judgment of those in charge of erecting the structure. Likewise it will be understood that the ventilator after it has once been fitted in the shop may be readily taken apart and packed for shipment, the several sections of the hood, as well as those of the deflector, being preferably substantially alike, and thus capable of being packed in small spaces.

In Fig. 8 the bracket is shown with a kerf 23^a below the opening for the tubular hood-section support, the screw-bolt 24 contracting the upper part of the bracket to constrict it and the tube 20 for clamping the flanged hood-sections.

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

1. The combination, with a ventilator-hood; of a conical deflector comprising a plurality of substantially triangular sections; a deflector-support secured to and depending centrally within the hood, and serving to hold the deflector-sections together and supporting means for the upper outer portions of said sections.

2. The combination, with the ventilator-casing D and a plurality of posts secured to and extending above the casing, a hood and hood-supports sustained by said posts, and a dependent conical deflector, constituted by a series of approximately triangular sections 25 having upper outer portions thereof sustained at the upper ends of said posts, and means for holding said sections together.

3. The combination, with a ventilator-hood; of a conical deflector comprising a plurality of sections; a plurality of hood-supports; a crown member disposed near and for supporting the upper ends of said hood-supports; and a plurality of posts to which said supports are secured and with which the deflector-sections are engaged.

4. The combination, with a ventilator-hood comprising a plurality of triangular sections having flanges at their edges; of a series of tubular hood-supports having slots to receive said flanges; and means for constricting said tubular hood-supports for clamping the edge flanges of an adjacent pair of sections together.

5. The combination, with a ventilator-hood comprising a plurality of sections; and a series of supports for said hood-sections; of a conical deflector comprising a plurality of sections having their base-corners cut away, and fitting said hood-supports; and brackets for engaging the lower end portions of said supports and having faces against which said

deflector-sections have supporting and positioning bearings.

6. The combination, with a ventilator-hood comprising a plurality of sections; and a series of supports for said hood-sections; of a conical deflector comprising a plurality of triangular sections having their base-corners cut away to fit said hood-supports; and brackets having grooves, and for engaging the lower ends of said supports, and having faces against which outer portions of said deflector-sections have supporting and positioning engagements.

7. The combination, with the ventilator-casing and ventilator-hood comprising a plurality of sections having edge flanges; and a series of tubular slotted hood-supports for receiving the flanges of said sections; of clamp-brackets for embracing the lower end portions of said hood-supports; posts secured to and extended above the top of the casing on which said brackets are mounted, and at the upper ends of which said brackets are mounted; and means for constricting said clamp-brackets for contracting the tubular hood-supports and binding the hood-section flanges.

8. The combination, with a conical deflector; and a ventilator-hood; of a cylindrical casing; posts for supporting said hood and deflector on the casing, said posts having base members each of which is provided with a groove to fit over the edge of said casing; and bolts detachably held on said base members and for securing said posts to the casing.

9. The combination, with a conical deflector; and a ventilator-hood; of a casing comprising a plurality of cylindrical sections; annular members interposed between said sections and for positioning the same relatively to each other; posts for supporting said hood-deflector on the casing, each of said posts having a base member provided with a groove to fit over the upper edge of the uppermost casing-section; and bolts detachably held on said base members and for securing all of the casing-sections and said posts together.

10. The combination, with a ventilator-hood comprising a plurality of sections; a series of hood-supports; and a crown member disposed near and for supporting the upper end of said hood-supports; of a conical deflector; and a deflector-support attached to the crown member and for holding said deflector in position relatively to said hood.

11. The combination, with a ventilator-hood comprising a plurality of sections; a series of hood-supports; and a crown member disposed near and for supporting the upper end of said hood-supports; of a conical deflector; and a deflector-support adjustably secured to the crown member and for holding said deflector in position relative to said hood.

12. The combination, with a ventilator-hood comprising a plurality of sections; a series of supports therefor; and a crown member dis-

posed near and for supporting the upper ends of said supports; of a conical deflector comprising a plurality of triangular sections; a deflector-support attached to said crown member; and means for holding the deflector-sections together and in contact with said deflector-support.

13. The combination, with a ventilator-hood comprising a plurality of sections; a series of supports therefor; and a crown member disposed near and for supporting the upper end of said hood-supports; of a conical deflector comprising a plurality of triangular sections; and a stay-rod screw-threaded at its lower end, and having a nut holding the deflector-sections together and in contact with said rod.

14. The combination, with a ventilator-hood comprising a plurality of substantially triangular sections; a series of hood-supports; brackets engaging the lower ends of said supports and having faces for supporting said deflector-sections; of a crown member disposed near and for supporting the upper ends of said hood-supports; and a stay-rod screw-threaded at its lower end and having a nut for holding the deflector-sections together and in contact with said rod.

15. The combination, with a ventilator-hood comprising a plurality of substantially triangular sections; a series of hood-supports; and brackets engaging the lower ends of said supports and having faces for supporting said deflector-sections; of a crown member disposed near and for supporting the upper ends of said hood-supports; a stay-rod screw-threaded at its lower end and having a nut for hold-

ing the deflector-sections together and in contact with said rod; a cap surmounting the hood-sections; and means for securing said cap on said rod.

16. The combination, with a ventilator-hood comprising a plurality of substantially triangular sections having flanges at their sides; a series of tubular hood-supports having slots to receive said flanges; and means for securing said hood-section flanges in the supports; of a conical deflector comprising a plurality of triangular sections, having their base-corners cut away to fit against said hood-supports; a crown member disposed near and for supporting the upper ends of said hood-supports; a deflector-support attached to the crown member; and means for holding each of the deflector-sections together and in contact with said deflector-support.

17. A portable ventilator comprising a sectional hood; a series of hood-supports; means for securing said hood-sections to the said supports; a sectional deflector removably held on said hood-supports and constructed to join with said hood-sections; a sectional casing; means for positioning said casing-sections relative to each other; and means connected to the uppermost casing-section and for supporting said hood-supports.

Signed by me at Springfield, Massachusetts, in the presence of two subscribing witnesses.

JOHN O. STANLEY.

Witnesses:

WM. H. BOND,
W. J. BROCKWAY.