M. B. MOYER.

VENTILATOR.

APPLICATION FILED MAR. 26, 1918.

1,284,427.

Patented Nov. 12, 1918.

2 SHEETS—SHEET 1.

FIG. 1.

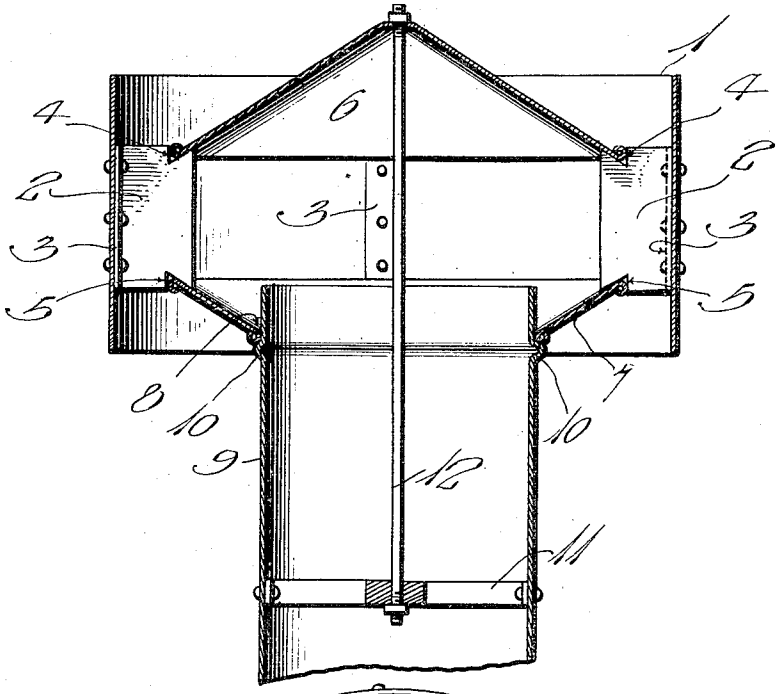
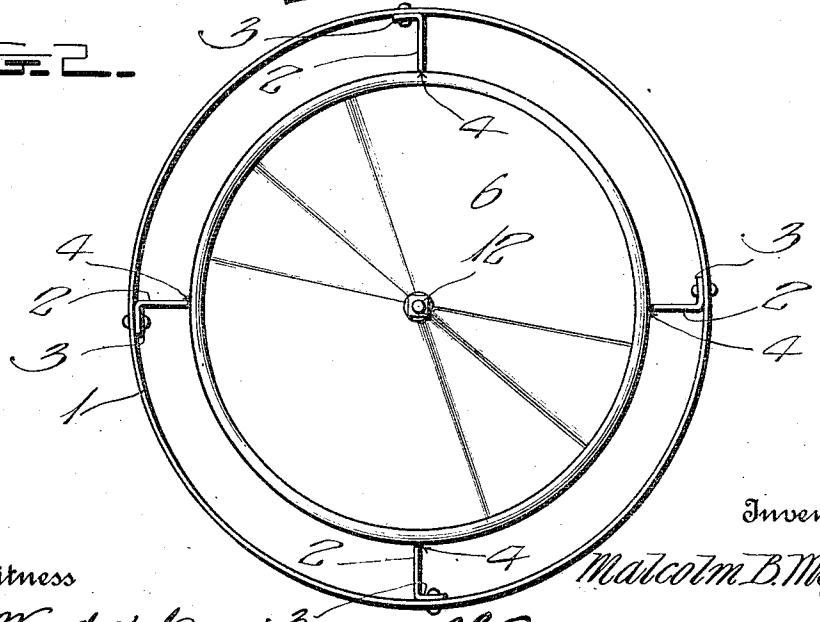


FIG. 2.



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2 SHEETS—SHEET 2.

FIG. 3.

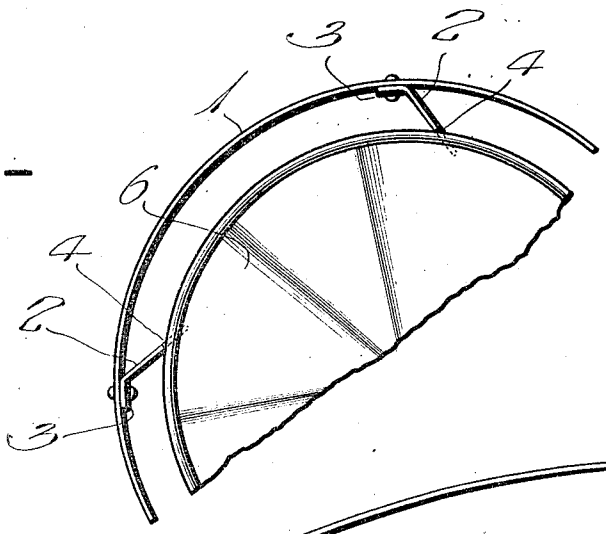


FIG. 4.

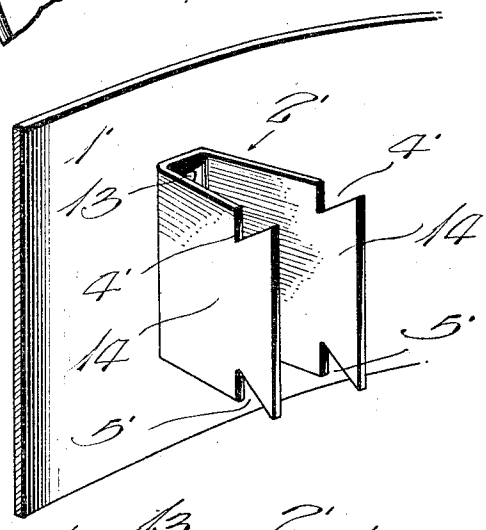
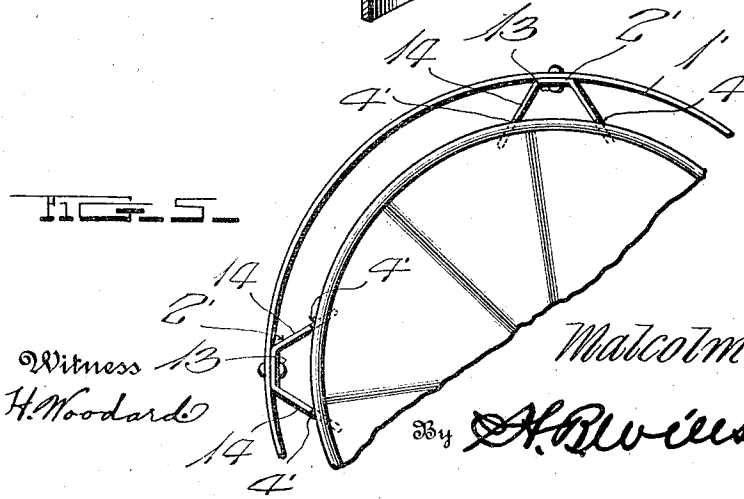


FIG. 5.



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UNITED STATES PATENT OFFICE.

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VENTILATOR.

1,284,427. Specification of Letters Patent. Patented Nov. 12, 1918.

Application filed March 26, 1918. Serial No. 224,837.

To all whom it may concern:

Be it known that I, MALCOLM B. MOYER, a citizen of the United States, residing at Montevideo, in the county of Chippewa and State of Minnesota, have invented certain new and useful Improvements in Ventilators; and I do 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.

My invention has for its object to simplify and cheapen the construction of ventilators such as that disclosed by my U. S. Patent No. 1246774 of Nov. 13, 1917, and at the same time to so construct the device as to permit it to be readily knocked down and compactly crated for shipment.

With the foregoing general object in view, the invention resides in the novel features of construction to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which form a part of this specification and in which:

Figure 1 is a central vertical section of one form of the ventilator;

Fig. 2 is a top plan view of the form of the invention shown in Fig. 1;

Fig. 3 is a detail top plan view showing the manner in which a larger top or bottom plate may be held in place by the bracket plate shown in Figs. 1 and 2;

Fig. 4 is a perspective view showing a modified form of bracket plate; and

Fig. 5 is a detail top plan view showing the manner of holding a larger top or bottom plate by the bracket plates of the form shown in Fig. 4.

In Figs. 1, 2 and 3 of the drawings above briefly described, the numeral 1 designates a continuous vertical wall formed of sheet metal and preferably though not necessarily of circular shape, the inner side of said wall having secured thereto a plurality of vertical bracket plates 2 which extend inwardly therefrom, preferably at right angles, the outer edges of said bracket plates having lateral flanges 3 which are riveted to the wall 1, while the upper and lower ends of said plate are formed with V-shaped notches 4 and 5 respectively, said notches being located adjacent the inner edge of the plates.

A top plate 6, in most cases of cone shape, rests on the upper ends of the bracket plates 2 with its edge spaced from the wall 1 and received in the upper notches 4. The lower ends of the aforesaid plates 2 rest on an inverted cone-shaped bottom plate 7 whose edge is spaced from the wall 1 and received in the notches 5, said bottom plate having a ventilator pipe opening 8 into which the upper end of a vertical ventilator pipe 9 extends, said pipe having an external bead 10 or other suitable means for supporting the bottom plate. A bridge 11 extends across the pipe 9 and a vertical tie rod 12 extends from this bridge to the top plate 6 to tie the several parts of the ventilator together and to secure the same upon the pipe 9. When this bolt is removed however the device may be knocked down and compactly crated for shipment.

In some instances it is advisable to use top and bottom plates of a greater diameter than in others, and in order to permit this change without otherwise altering the construction of the ventilator, the bracket plates 2 are formed of ductile or resilient metal so that they may be bent or sprung laterally as indicated in Fig. 3, thus bringing their notches 4 and 5 closer to the wall 1 to accommodate the larger top or bottom plates. When the bracket plates 2 are thus sprung, they are placed under tension and it will be obvious that this tension will be exerted to effectively grip the bottom and top plate to prevent possible rattling under the action of wind.

In the form of the invention shown in Figs. 4 and 5, the bracket plates 2′ are riveted along their vertical centers to the wall 1′ as shown at 13, the ends 14 of said plates being bent laterally inward into diverging relation and having near their inner ends upper and lower notches 4′ and 5′ similar to those above described. The plates 2′ are also of resilient or ductile material in order that their ends 14 may be moved toward or away from each other (see Fig. 5) to accommodate top and bottom plates of different diameters.

Both forms of the invention are extremely simple and inexpensive, may be compactly crated for shipment, easily set up for use and are highly efficient when once installed. Regardless of the direction in which the air currents may be moving, an upward suction will be created through the ventilator pipe 9 much the same manner as set forth at length in the patent above referred to.

Since probably the best results are ob-

tained from the several details shown and described, these details are preferably employed, but within the scope of the invention as claimed, numerous minor changes may well be made.

I claim:

1. A ventilator comprising a continuous wall of uniform diameter throughout its height, the upper and lower ends of said wall being open and being symmetrical, a plurality of vertical sheet metal bracket plates of rectangular shape extending inwardly from said wall and having their straight outer edges bent laterally throughout their lengths and secured thereto, the upper and lower extremities of said plates each having a notch, said notches being located at the inner corners of said plates and the upper and lower ends of the latter being symmetrical, a bottom plate having a ventilator pipe opening, the edge of said bottom plate being received in the lower notches of the bracket plates, and a top plate having its edge disposed in the upper notches of said plates.

2. A ventilator comprising a top and a bottom plate, the latter having a ventilator pipe opening, a continuous wall surrounding said plates and spaced from the edges thereof, and a plurality of vertical resilient bracket plates secured to said wall and extending inwardly therefrom, said bracket plates having notches receiving the edges of said top and bottom plates and being sprung to tangential positions thereby to place them under tension and to utilize such tension to retain said bracket plates yieldably against said top and bottom plates.

3. A ventilator comprising a continuous vertical wall, a plurality of vertical bracket plates secured at their vertical centers to the inner side of said wall, the ends of said bracket plates being bent laterally inward into diverging relation and having angular notches in their upper and lower edges, a top plate resting on said bracket plates with its edge spaced from said wall and received in the upper notches, and a bottom plate upon which said bracket plates rest, the edge of said bottom plate being spaced from said wall and received in the lower notches, said bottom plate having a ventilator pipe opening.

4. A structure as specified in claim 3, said bracket plates being ductile whereby they may be bent or sprung toward or away from each other to vary the distance between their notches and said wall, according to the size of said top and bottom plates.

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

MALCOLM B. MOYER.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."