

No. 701,883.

Patented June 10, 1902.

P. B. HOLE.
CAR VENTILATOR.

(Application filed Feb. 25, 1902.)

(No Model.)

Fig. 1.

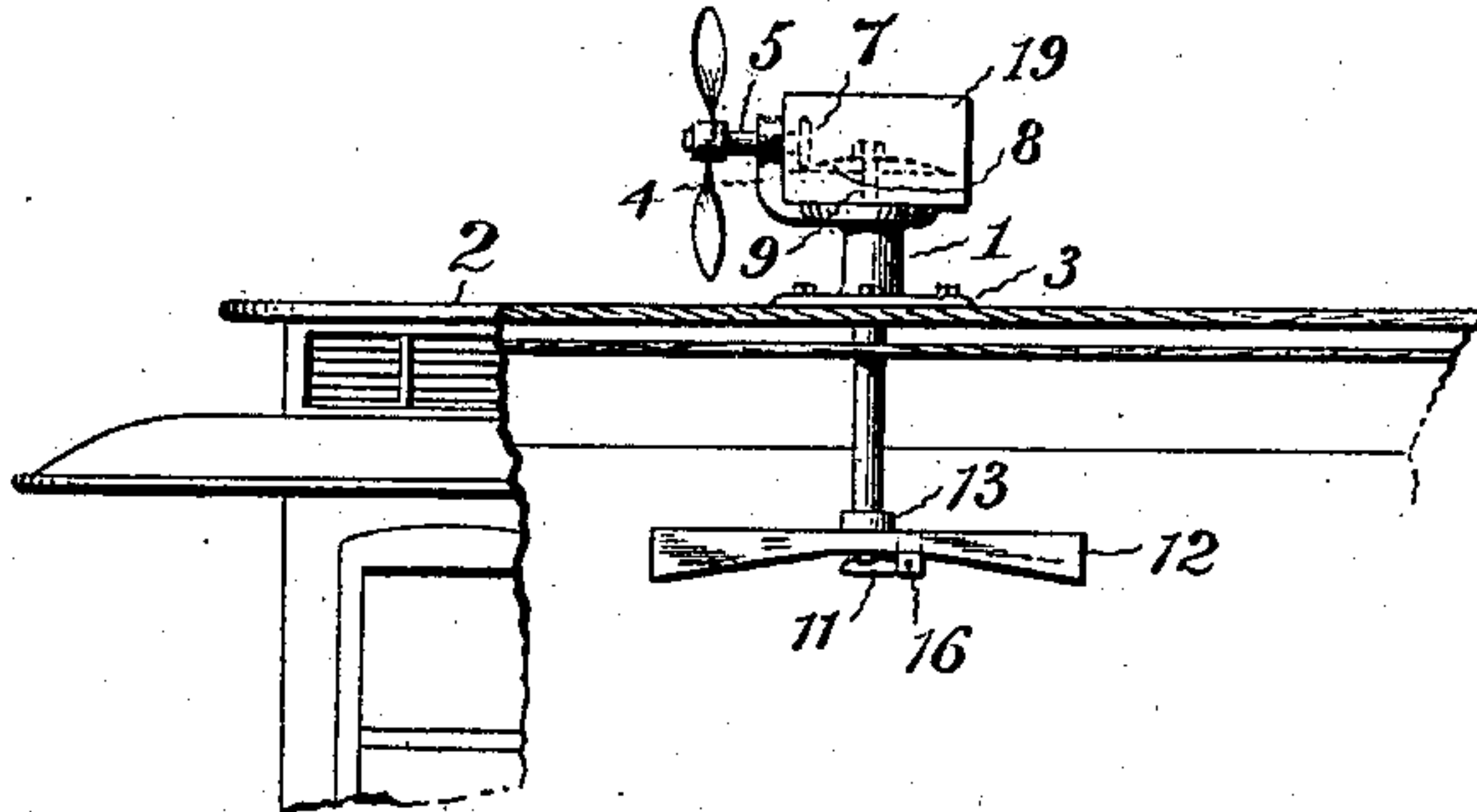


Fig. 2.

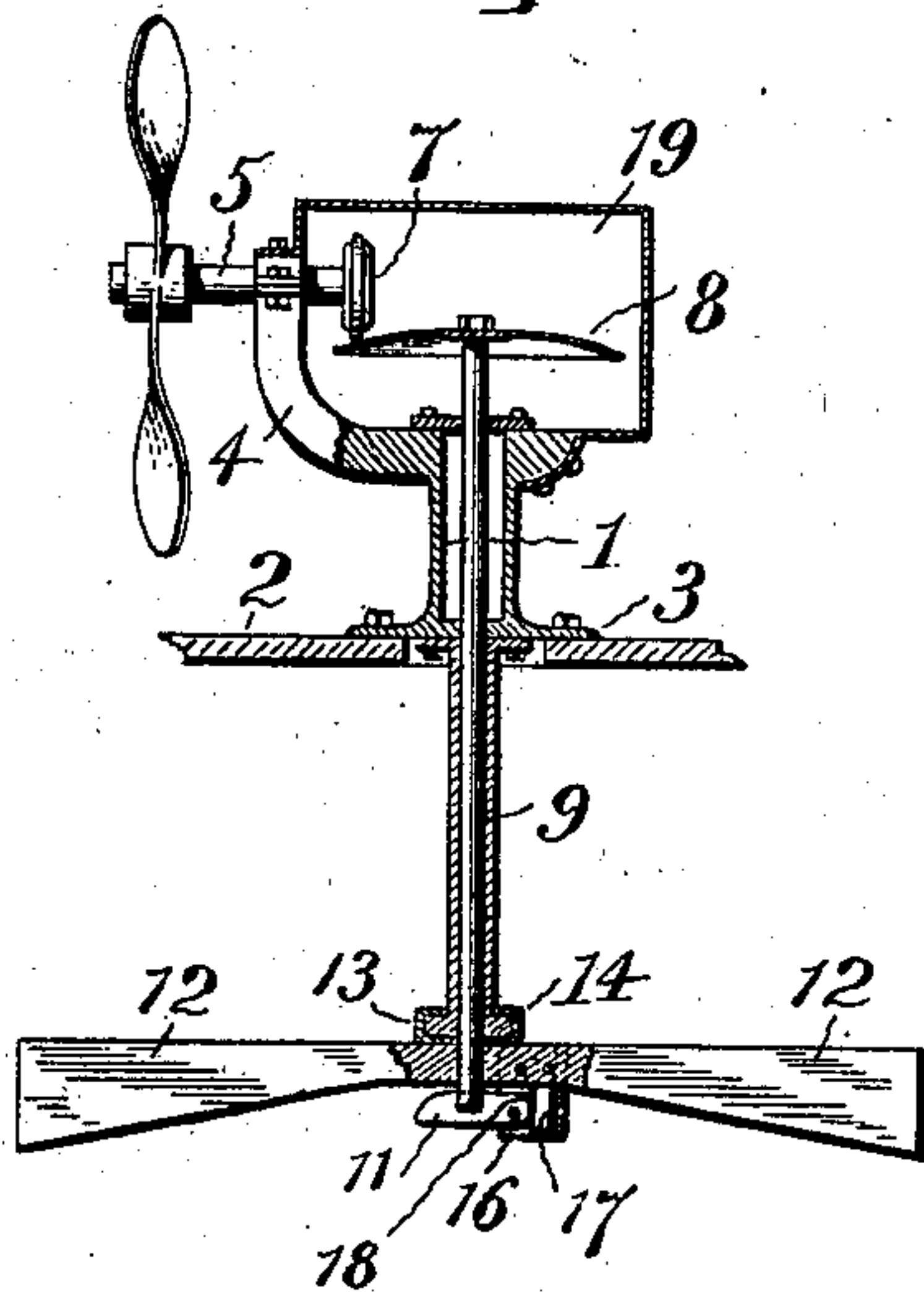


Fig. 3.

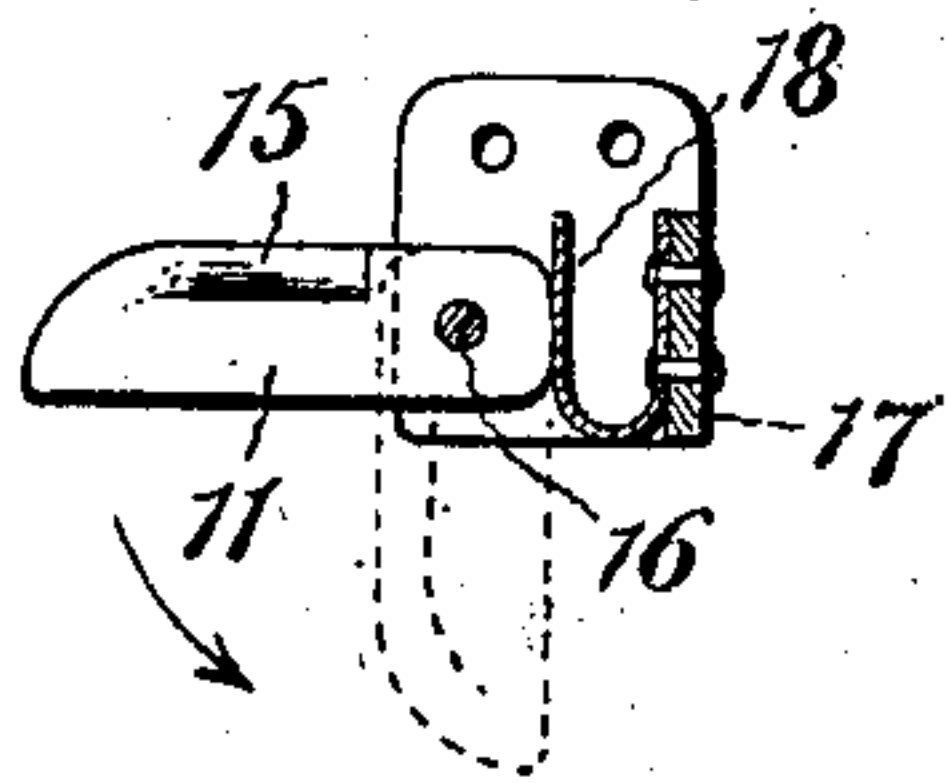
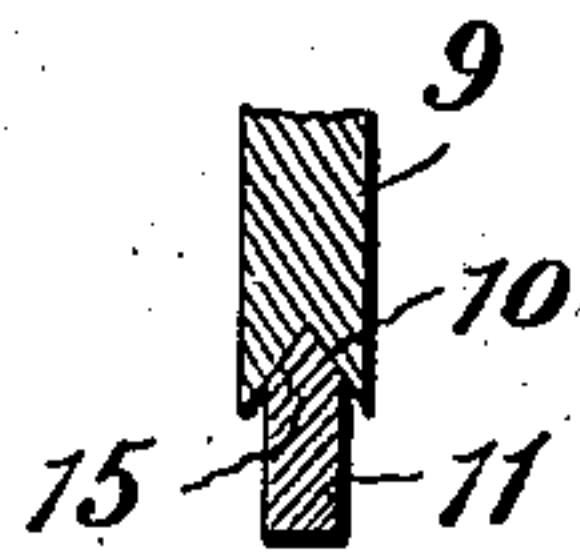


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CAR-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 701,883, dated June 10, 1902.

Application filed February 25, 1902. Serial No. 95,545. (No model.)

To all whom it may concern:

Be it known that I, PETER B. HOLE, a citizen of the United States, residing at McIntosh, in the county of Polk and State of Minnesota, have invented a new and useful Car-Ventilator; 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.

The invention relates to a car-ventilator; and it has for its object to provide a simple and inexpensive device of this character adapted to be readily applied to a car and capable of being operated by the motion of a train when the car is turned in either direction.

A further object of the invention is to provide a car-ventilator which may be readily thrown into and out of operation and in which motion will be positively communicated from an exterior longitudinal fan-shaft to a transversely-disposed inwardly-extending fan-shaft without the use of spur or analogous gearing.

The invention consists in the novel construction and arrangement of parts hereinafter shown and described, and particularly pointed out in the appended claims.

In the drawings forming part of this specification, and in which like numerals of reference designate corresponding parts, Figure 1 is an elevation, partly in section, of a car-ventilator constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged sectional view illustrating the construction of the device for throwing the inner fan into and out of gear. Fig. 4 is a similar view illustrating the construction of the inner end of the transverse shaft and the beveled edge of the locking device.

Referring to the drawings, 1 designates a bearing-bracket designed to be mounted in an upright position upon the top of a car 2 and consisting of a tubular body portion extending through the top of the car and provided between its ends with flange 3, arranged upon the exterior of the top of the car and perforated for the reception of suitable fastening devices for securing the bracket to the car. The bearing-bracket is provided at its top with an upwardly-extending arm 4, having its

upper end offset from the longitudinal bearing-opening of the bracket and provided thereat with a horizontal bearing-opening in which is arranged an exterior longitudinal fan-shaft 5. The longitudinal exterior fan-shaft 5 is provided at its outer end with a vertically-disposed exterior fan having propeller-shaped blades and adapted to be rotated by the force of the air incident to the movement of a train and capable of operation when the car upon which the ventilator is mounted is arranged with either end toward the front of the train, whereby it is unnecessary to adjust the device to suit the position of the car in a train. The longitudinal fan-shaft is provided at its inner end with a vertically-disposed small wheel 7, having a rubber tire or rim arranged to run on the upper face of an approximately horizontally disposed resilient disk or wheel 8, which is flexed or deflected to insure the proper frictional contact between the wheels, whereby an inwardly-extending vertically-disposed shaft 9 will be positively rotated. The vertically-disposed transversely-arranged shaft 9 is journaled in the longitudinal bearing-opening of the bracket 1, and it has the resilient disk or wheel suitably fixed to its upper end. The lower end of the vertical shaft, which extends inward or downward beyond the inner or lower end of the tubular portion of the bearing-bracket, is provided with a tapered or V-shaped notch 10, which is engaged by a pivoted locking device 11 of an inner or lower fan 12, whereby the latter is fixed to the vertical shaft 9. The inner horizontally-disposed fan 12 is provided with a central bore or opening to receive the shaft 9, and it has a collar or sleeve 13, forming a socket for the reception of an enlarged portion 14 of the lower end of the tubular portion of the bearing-bracket, on which the lower or inner fan is mounted. The lower or inner fan, which is provided with straight tapering blades, is adapted to agitate the air within a car or other conveyance when the same is in motion, and the locking device, which is provided with a beveled edge 15 to conform to the configuration of the tapered notch of the vertical shaft, is secured by a pivot 16 in an approximately U-shaped bracket or support 17, mounted on the inner fan 12. The inner pivoted end or heel of the

locking device is engaged by a spring 18, arranged within the U-shaped bracket or support and adapted to hold the locking device in and out of engagement with the lower end 5 of the vertical shaft. The pivoted locking device is adapted to be readily swung into and out of engagement with the vertical shaft, and when it is out of such engagement the vertical shaft rotates freely without rotating the 10 inner or lower fan.

The wheels for communicating motion from one shaft to the other are housed within a suitable casing 19, mounted on the upper portion of the bearing-bracket and adapted to 15 exclude cinders, dust, and other accumulation from the wheels and designed also to protect the same from the weather.

I desire it understood that various changes in the form, proportion, and minor details of 20 construction within the scope of the appended claims may be made without departing from the spirit of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by 25 Letters Patent, is—

1. A device of the class described comprising a bearing-bracket, designed to be mounted on a car or the like, an exterior shaft, mounted on the bracket and provided with an 30 exterior fan, an inwardly-extending shaft also mounted on the bearing-bracket and projecting into the car, wheels secured to the adjacent ends of the shafts, one of the wheels being resilient and being deflected by the other, 35 and an interior fan connecting with the inwardly-extending shaft, substantially as described.

2. A device of the class described, comprising a bearing-bracket, consisting of a tubu- 40 lar body portion, provided at its outer end with an offset arm and having an enlargement

at its inner end, said body portion being also provided between its ends with a flange, adapted to be secured to a car, an exterior shaft, mounted on the arm, an inwardly-ex- 45 tending shaft arranged in the tubular portion of the bearing-bracket, wheels arranged at the adjacent ends of the shafts and connecting the same, a casing mounted on the outer portion of the bracket and receiving the 50 wheels, an outer fan mounted on the exterior shaft, an inner fan having a socket receiving the enlargement of the bracket, and means for connecting the inner fan with the inwardly- 55 extending shaft, substantially as described.

3. A device of the class described, comprising a bearing-bracket, an exterior shaft mounted thereon, an outer fan secured to the shaft, an inwardly-extending shaft, mounted on the bearing-bracket, and provided at its 60 inner end with a notch, wheels connecting the shafts, an inner fan journaled on the bearing-bracket, and a spring-pressed, pivoted locking device mounted on the inner fan and arranged to engage the notch of the inwardly- 65 extending shaft, substantially as described.

4. A device of the class described comprising a bearing-bracket, a shaft mounted thereon, an inner fan, journaled on the bearing-bracket, a support, secured to said fan, a 70 spring arranged within the support, a locking device, pivoted to the support and engaged by the spring and held by the same in engagement with the shaft, and an outer fan for operating the said shaft, substantially as de- 75 scribed.

In testimony whereof I have hereto affixed my signature in the presence of two witnesses.

PETER B. HOLE.

Witnesses:

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