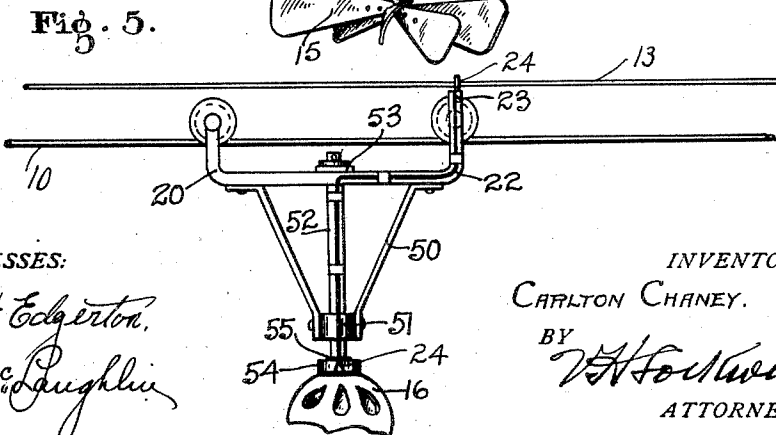
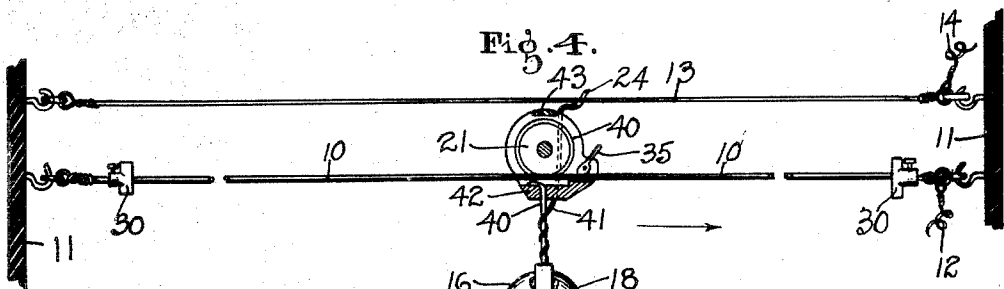
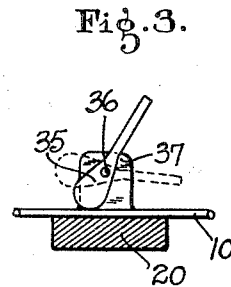
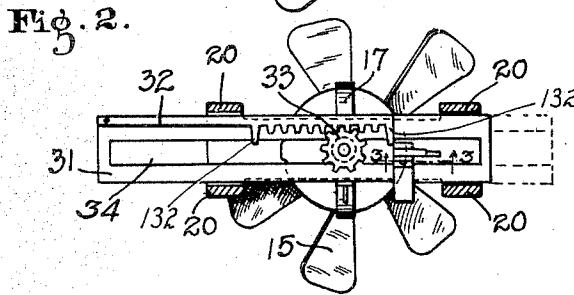
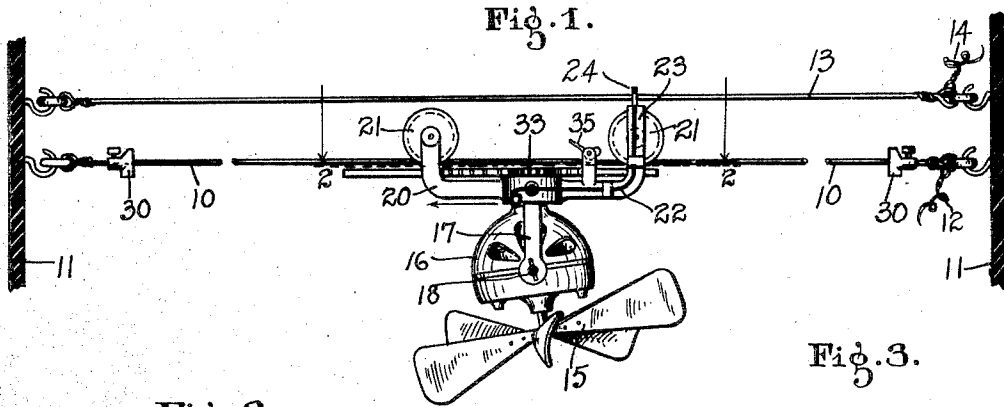


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TRAVELING FAN.
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1,078,609.

Patented Nov. 18, 1913.



WITNESSES:

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TRAVELING FAN.

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Specification of Letters Patent.

Patented Nov. 18, 1913.

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To all whom it may concern:

Be it known that I, CARLTON CHANEY, a citizen of the United States, and a resident of Glenwood, county of Rush, and State of Indiana, have invented a certain useful Traveling Fan; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to provide a ventilating fan construction wherein the fan automatically travels as it operates and automatically reverses the direction of its travel, whereby one fan can ventilate a large room by traveling from one end to the other thereof, to and fro, or around the room wherever the track of the fan may be arranged. Such an arrangement causes one fan to do the work of many stationary fans and will keep the air in the room pure and it can be arranged to suit a room of any size or to pass to any part of the room. Furthermore, the fan can be stopped at any point, when desired, and arranged to operate like a stationary fan.

The chief feature of the invention consists in the idea of suspending the fan on a track so that it can travel, and setting the fan at a slight angle from a horizontal position so that the fan will not only blow air downward, but, by reason of the angular position, will blow itself backward and cause itself to travel. The speed of travel, as well as the degree of fanning downward, may be varied by changing slightly the angle of the fan.

The nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings, Figure 1 is a side elevation of such a device with the track broken away at two points. Fig. 2 is a section on the line 2—2 of Fig. 1, showing parts in plan also. Fig. 3 is an enlarged section on the line 3—3 of Fig. 2. Fig. 4 is a side elevation of a modified form, the hanger being shown in section. Fig. 5 is a side elevation of another modified form, the lower part of the motor and the fan being broken away.

In the form shown herein in Figs. 1 to 3, there is a track 10 consisting of a wire stretched between walls 11. This track is shown broken away between its ends and it may be of any form desired, and electric

current is brought to it over a wire 12. A companion wire 13 is located above the track 10 and parallel therewith and current goes out through it over a wire 14. It is immaterial as to which of the wires 12 or 14 the current enters through. The fan 15 is of usual type of electric fans, being mounted on an electric motor 16 and said motor is carried in a U-shaped hanger 17 in which it is clamped by clamps 18 so that the fan can be set at any desired inclination from a horizontal position, as shown. The hanger 17 is rotatably mounted in a frame 20 suspended from a pair of wheels 21.

The current from the track 10 passes through the wheels 21 and frame 20 and hanger 17 to the motor and leaves the motor through a wire 22 which is secured to the frame 20 and insulated therefrom and there is an upward extension 23 on one end of the frame 20 which projects rather close to the wire 13 and it carries a brush 24 adapted to engage the wire 13 and it is connected with the wire 22.

When the current is turned on and the fan operated, it will automatically travel by reason of its inclined position, as it will push itself in the direction indicated by the arrow in Fig. 1. At the same time it will operate as a fan. By increasing the inclination, the fan will travel faster, or by decreasing it, it will travel more slowly. This is accomplished by the clamp 18 for the hanger 17 is held vertically by the frame 20.

The fan is automatically reversed by the stop blocks 30 which are secured to the ends of the track 10 or at any place on the track desired. The fan travels until one of the stop blocks 30 engages a sliding bar 31 which is slidably mounted upon the frame 20, as seen in Fig. 2, and which has upon one side a rack 32 which engages a pinion 33 secured upon the upper end of the hanger 17. The upper end of the hanger 17 projects through a longitudinal slot 34 in the plate 31 and in that way the rack and pinion are held together in mesh, and they are made of such dimensions that one movement of the rack 31 will give the fan and motor a substantially half revolution and then the fan will automatically travel in the other direction until the other end of the plate 31 carrying the rack engages the other stop 30 and thus causes a return half

revolution of the fan and motor so that the fan will again travel in the other direction. Stops 132 limit the action of the rack.

If it be desired to stop the fan in any position, this is done by a cam lever 35 which is pivoted at 36 to a projection 37 from the frame 20, see Fig. 3, and when operated to the full line position, it clamps the frame 20 to the track 10 and when operated to the dotted line position, it disengages from said parts so that the fan will travel. In this way the fan can be locked in any position and serve, for the time being, as a stationary fan.

In the modified form shown in Fig. 4, the device is simplified, the fan and motor being merely suspended by two wires 40 and 41 which permit the fan and motor to turn at each end of the travel. There is only one wheel 21 in this form and it is carried in a frame 42 which is much smaller and simpler than the frame 20, having a lower portion in which the wire 40 is held and suspended so that the current coming in through the track 10 goes to the motor through this wire 40 and current goes out from the motor through wire 41 and the wire 13, the upper end of the wire 41 being held by a plate 43 on the upper end of the frame 40 so that said wire 41 will brush the wire 13. The clamp 35 is mounted on the frame 46 so that it engages the track the same as has been explained.

In the modified form shown in Fig. 4, no reversing mechanism is employed, but the fan is merely set at an angle by the clamps 18 so that its inclination from the horizontal position will cause it to travel in one direction until the frame 42 strikes a stop 30 and then the device will stop traveling for a moment, but the fan will keep operating and in a moment will turn about half way until the frame 42 starts to travel in the other direction so as to relieve the fan and then it will keep traveling that way and in that position until the frame 42 strikes the other stop 30, whereupon the fan will automatically turn again until the frame starts to travel again in the opposite direction and relieve the fan. This form is much simpler than the one shown in Figs. 1 to 3, and will operate, but not with the positiveness of the preceding form.

In the modified form shown in Fig. 5 there is a frame 20 substantially like that shown in Fig. 1, but it has two brace bars 50 extending down from it carrying a bearing 51 in which a shaft 52 is mounted which carries the motor 16. This shaft extends through the bearing 51 and also through the frame 20 and has a washer or plate 53 on top for supporting it. In this form the wire 22 is mounted substantially as in Fig. 1 and brushes against the wire 13, but the lower end of that wire brushes against a disk 54

insulated from the other parts of the motor and connected with the motor so that the current to the motor will come through rod 52 and the current from the motor will pass out through disk 54 and wire 22. Insulation is shown at 55. The reversing mechanism is omitted from the drawings in Fig. 5, but it is substantially the same as that in Fig. 1.

The invention is not limited to any particular details of construction, such as are shown herein, the chief feature being the mounting of an electric fan so that it can be set at an inclination from the horizontal position and thus be caused to automatically travel, and in the second place, the provision of stops or other means to cause it to reverse its direction of travel. By "hanger" in the following claims is meant any means for supporting the fan and motor suspended from the track.

I claim as my invention:

1. The combination of a horizontal track, and an electric fan mechanism adapted to travel thereon and having a fan arranged to maintain the fan at an inclination from a horizontal position, whereby the fan will cause the fan mechanism to travel on the track.

2. The combination of a horizontal track, an electric fan, means adapted to travel on the track and support the fan, and means for maintaining the fan at an inclination from a horizontal position, whereby the fan will propel itself on the track.

3. The combination of a horizontal track, a traveling hanger thereon, an electric fan flexibly suspended from said hanger, and means for adjusting the fan at an inclination from a horizontal position.

4. The combination of a single horizontal track, a hanger to travel thereon, an electric motor centrally suspended from the hanger, a single fan driven by said motor, and means for clamping the motor to the hanger for maintaining the fan at an inclination from a horizontal position.

5. The combination of a single horizontal track, a hanger to travel thereon yoke-shaped at its lower end, an electric motor mounted in said yoke, a fan driven by said motor, and a clamp for clamping the motor to the yoke so as to maintain the fan at an inclination from a horizontal position.

6. The combination of a horizontal track, a traveling hanger thereon, an electric fan suspended from said hanger, means for adjusting the fan at an inclination from a horizontal position, and means for clamping the hanger at any desired position on the track.

7. The combination of a horizontal track, a traveling hanger thereon, an electric fan suspended from said hanger, means for adjusting the fan at an inclination from a horizontal position, and a stop at each end

of the track for limiting the travel of the hanger.

8. The combination of a horizontal track, a traveling hanger thereon, an electric fan suspended from said hanger, means for adjusting the fan at an inclination from a horizontal position, a stop at each end of the track, and means engaged by the stop for turning the fan a half revolution whereby it will travel in an opposite direction.

9. The combination of a horizontal track, a traveling hanger thereon, an electric fan suspended from said hanger, means for adjusting the fan at an inclination from a horizontal position, a horizontal plate in connection with the mounting of the fan in the hanger, and a stop at each end of the track in position to engage the end of said plate and cause it to give the fan a half revolution for reversing the direction of movement thereof.

10. The combination of a horizontal track, a traveling hanger thereon, an electric fan suspended from said hanger, means for adjusting the fan at an inclination from a horizontal position, a gear in connection with the mounting of the fan in the hanger, a rack bar slidably mounted in the hanger and engaging said gear, and a stop at each end of the track for engaging the end of the rack bar when the fan arrives at the end of the track for causing a reversal of the direction of the movement of the fan.

11. The combination of a horizontal track, a wire mounted parallel with and above the track, electrical connections with said track and wire, a hanger adapted to travel on the track, an electric motor supported by the hanger, a fan carried and driven by the motor and held at an inclination from a horizontal position to propel the hanger along the track, and means carried by the

hanger for electrically connecting the motor with said wire and track.

12. The combination of a horizontal track, a wire mounted parallel with and above the track, electrical connections with said track and wire, a hanger adapted to travel on the track, an electric motor supported by the hanger and in electrical communication with the track, a fan carried and driven by the motor and held at an inclination from a horizontal position to propel the hanger along the track, a wire mounted on said hanger and insulated therefrom with one end connected with the motor, and a brush carried by the hanger connected with the other end of said insulated wire for brushing the wire mounted above the track.

13. The combination of a horizontal track, a wire mounted parallel with and above the track, electrical connections with said track and wire, a hanger adapted to travel on the track, an electric motor supported by the hanger and in electrical communication with the track, a fan carried and driven by the motor and held at an inclination from a horizontal position to propel the hanger along the track, a wire mounted on said hanger and insulated therefrom, means electrically connected with the motor and mounted on the motor frame and insulated therefrom in position to be brushed by one end of said wire, and means carried by the hanger to which the other end of said wire is connected for brushing the wire mounted above the track.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

CARLTON CHANEY.

Witnesses:

J. H. WELLS,

O. M. McLAUGHLIN.