

(No Model.)

G. W. GARRETT.
VENTILATOR AND DUST EXCLUDER FOR RAILWAY PASSENGER CARS.
No. 601,054. Patented Mar. 22, 1898.

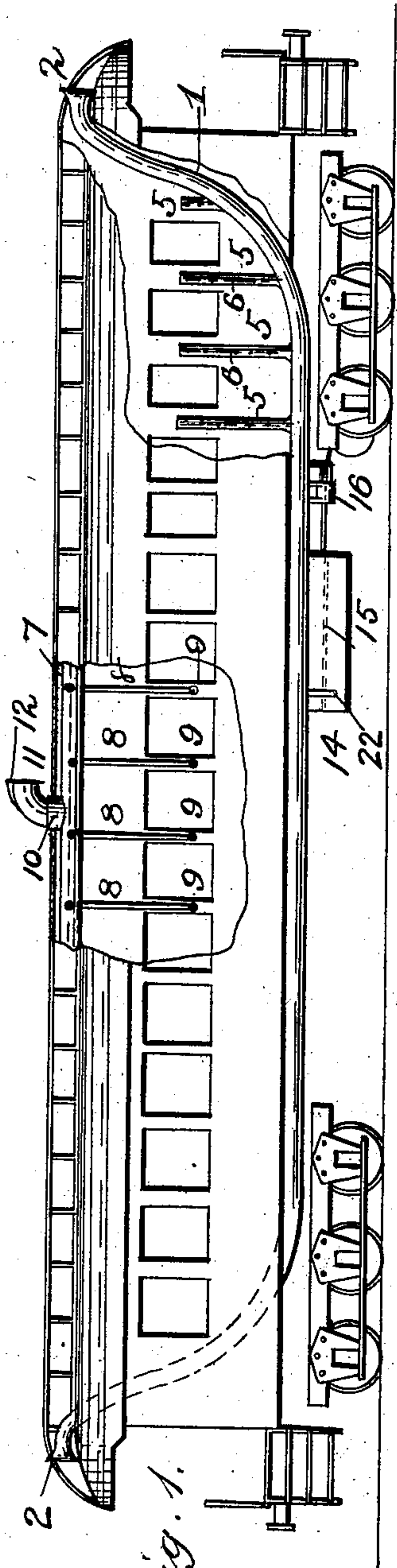


Fig. 1.

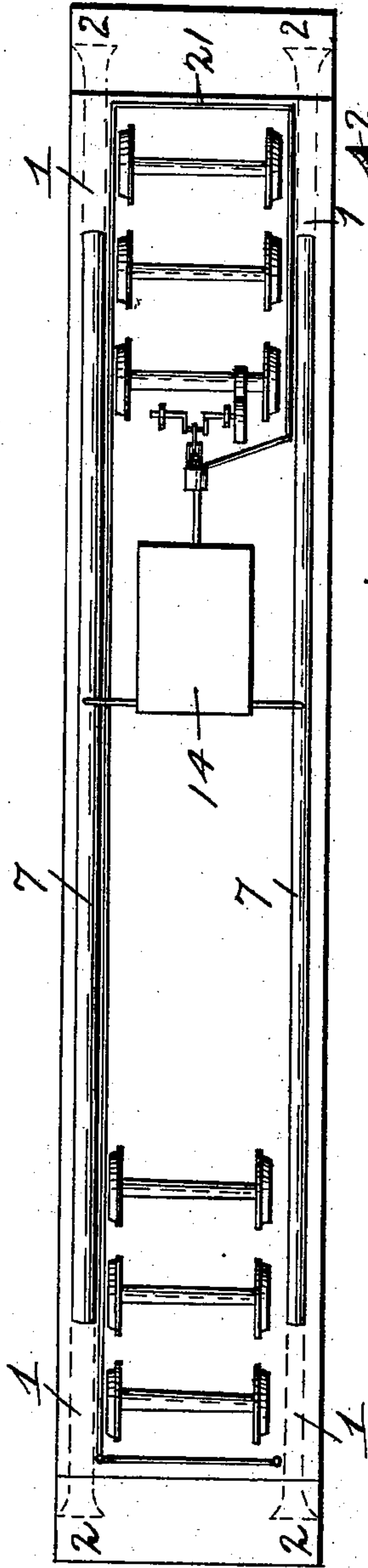


Fig. 2.

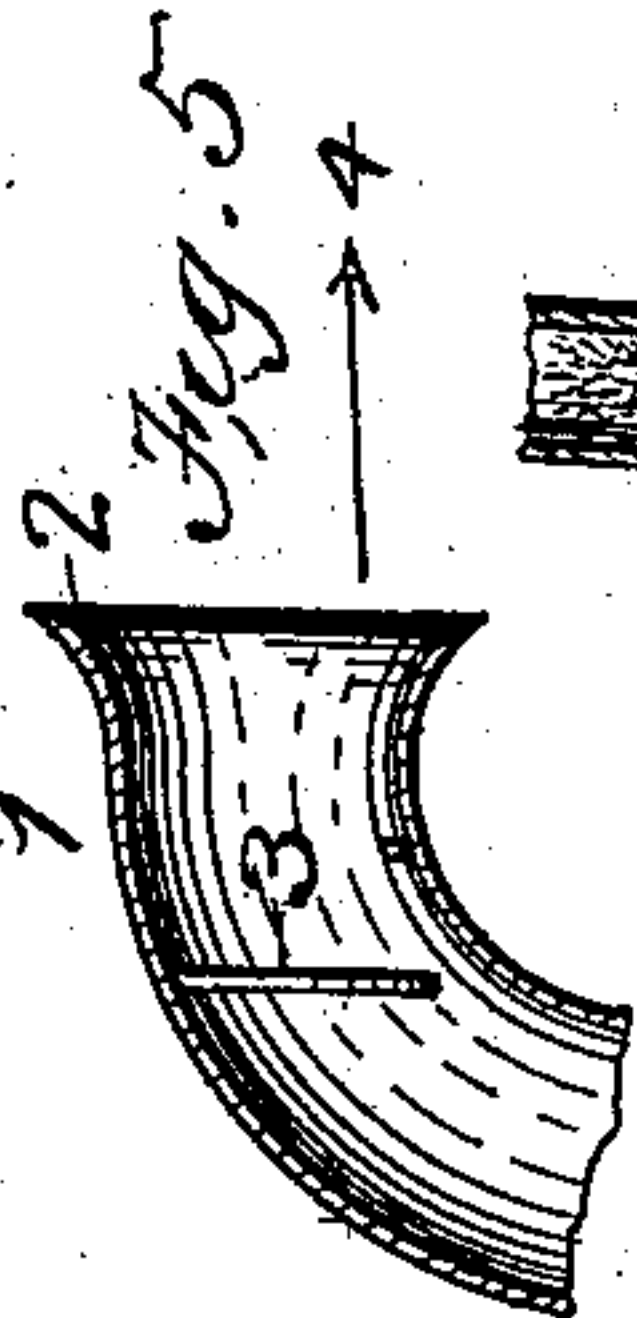


Fig. 3.

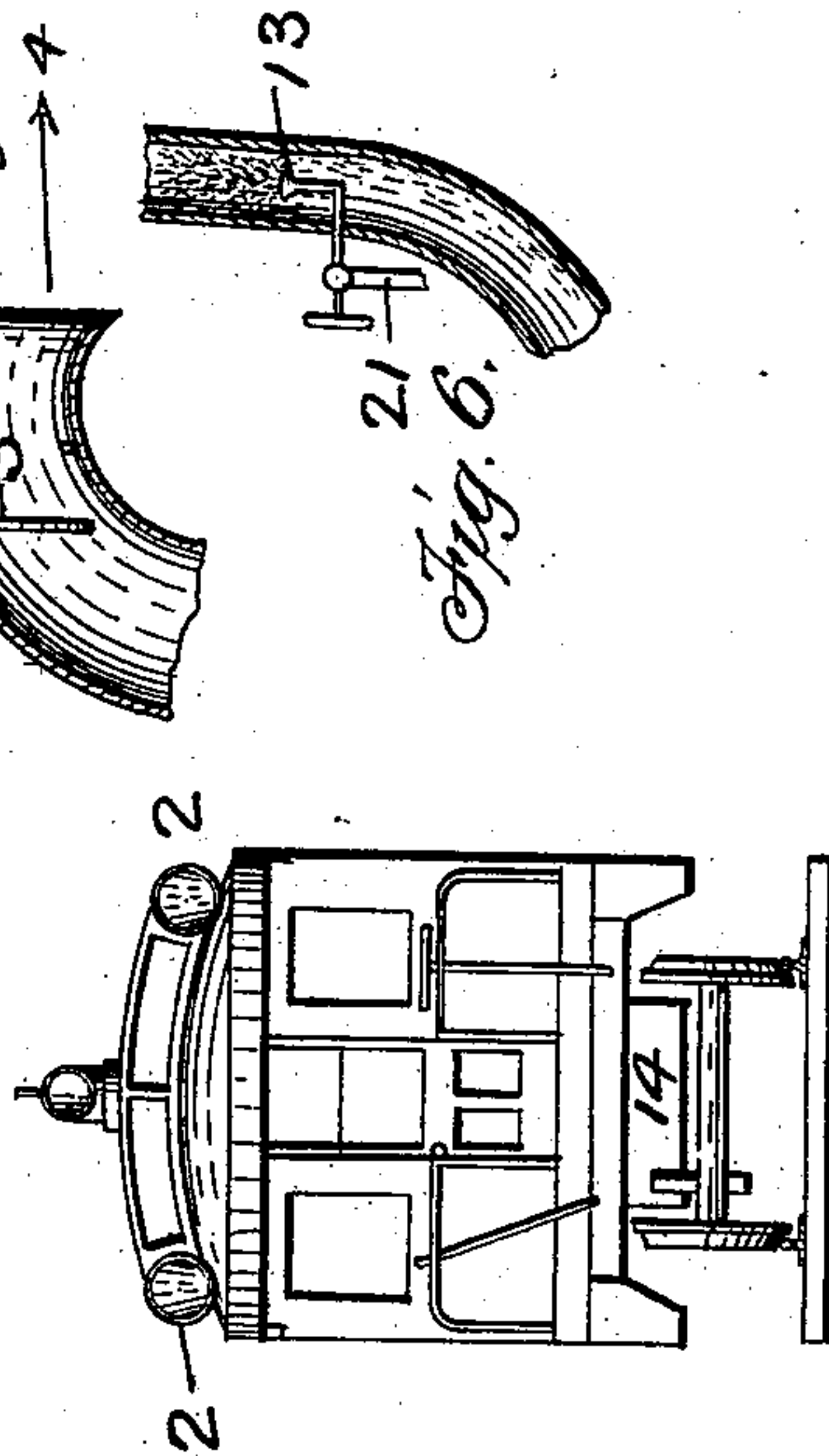
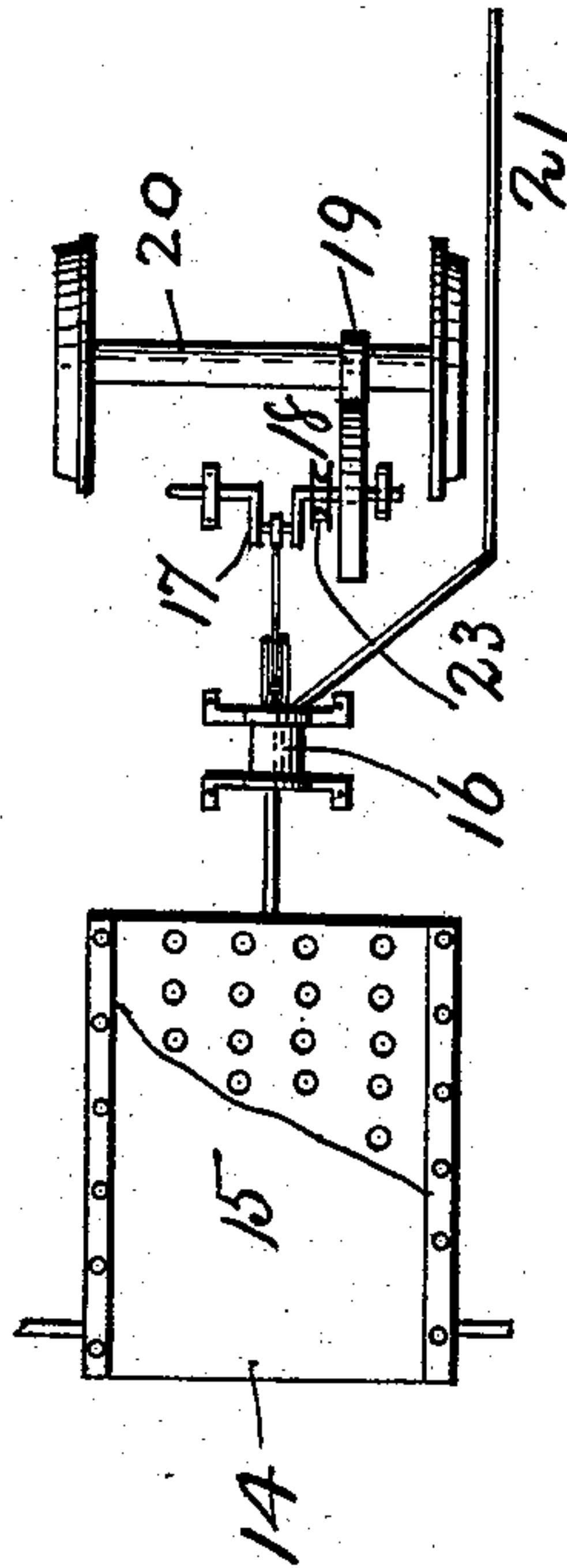


Fig. 4.



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GEORGE WASHINGTON GARRETT, OF ARKADELPHIA, ARKANSAS.

VENTILATOR AND DUST-EXCLUDER FOR RAILWAY PASSENGER-CARS.

SPECIFICATION forming part of Letters Patent No. 601,054, dated March 22, 1898.

Application filed June 4, 1897. Serial No. 639,467. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON GARRETT, a citizen of the United States, residing at Arkadelphia, in the county of Clark and State of Arkansas, have invented a new and useful Improvement in Ventilating and Preventing Dust from Entering Railroad Passenger Cars, of which the following is a specification.

Figure 1 is a side elevation of a passenger-coach with my invention attached thereto. Fig. 2 is a bottom plan view of Fig. 1. Fig. 3 is a rear elevation of Fig. 1. Fig. 4 is a detail view showing the water-tank, the pump, and mechanism for operating the pump. Fig. 5 is an enlarged view representing the ends of the air-pipes, each end having hinged therein an automatic valve. Fig. 6 represents a section of the pipe having therein a spray-cock.

My invention is described as follows:

1 represents two air-pipes. These pipes have large funnel ends 2. Said pipes run the entire length of the coach, the funnel ends being at the top and each end of the coach, so as to catch the air as the coach moves forward. These pipes run down into the interior of the coach and on each side and are preferably run between the outer and inner shells of the coach. In each funnel end is hinged an automatic valve 3, so that when the coach moves forward in the direction of the arrow 4 the air enters the end 2, throws back the valve 3, and passes on to the rear end and closes that valve, which corresponds exactly with valve 3.

Integral with and running up from the pipes 1 and between each window are perforated tubes 5. The upper ends of these tubes are closed. These tubes are provided with perforations which let the air out into the coach, and each perforation is provided with a door 6, which may be opened and closed at will for the purpose of regulating the amount of air that may be admitted through the perforations of these tubes or for the purpose of entirely shutting off the air, thus adapting the current of air to the temperature of the weather.

Running along the roof of the coach on the inside thereof and preferably between the inner and outer shells and in the middle of the coach is a tube 7. This tube is closed at each end; but running down from this tube and

integral therewith are tubes 8. These tubes are open at their lower ends and adapted to empty their contents into tube 7. These tubes 8 run down between each window, and each tube has at each lower end a door 9, so that it may be closed at will.

Midway of the tube 7 and running up from the same is a neck 10, which extends a little way above the top of the coach, and on the top of this neck is pivoted an elbow suction-pipe 11, provided with a wind-flange 12, so that when the coach runs forward it will turn back, and thus draws the air up through the pipes 8 into the tube 7 and from tube 7 out into the open air.

The tubes 7 8 10 and suction-elbow 11 are necessarily a part of my invention and cooperate with pipes 1 and 5, because if there were no way for the air to escape the pipes 1 and 5 would soon fill the coach with air, and as it could not get out the ventilation would stop, but as the air enters the funnels 2 and passes out into the coach through the pipes 5 it is then taken up by the pipes 8 and passed out through pipe 10, and thus sweet fresh air is constantly circulated through the coach; but as air is sometimes warm, dusty, and foul I clean and cool the air by means of a spray-cock 13, Fig. 6. This is performed as follows: Under the bottom of the coach, or in or on some suitable part thereof, is secured a water-tank 14. Said water-tank 14 is provided with a filter 15, and secured to the coach in a position to pump the water from said tank is a pump 16; operated by an elbow-crank 17, and on one end of this elbow-crank is secured a wheel 18, which contacts with the drive-wheel 19, rigidly secured on an axle 20 of the coach, and as the wheels of the coach go round the axle 20 rotates, and thus the drive-wheel 19 is rotated, and this in turn drives the wheel 18. This wheel 18 is adjustably secured on the elbow-crank 17, so that it may be moved to the right or the left, and thus by a bifurcated lever working in the groove 23 in the neck of the wheel 18 or other mechanical device be thrown out of or in contact with wheel 19. This wheel 18 may be operated by cogs, band, or by contact with wheel 19. Running from said pump is a pipe 21, which runs all around the coach and has at four different points a spray-cock 13, which

enters the pipes 1 a short distance below the valves 3, and as the air enters these pipes 1 the air is washed and cooled by a spray of water constantly issuing from the spray-cocks 13. The water naturally seeks the lowest point in the pipes 1, and is thence conducted back into the lower half of the tank 14 by means of pipes 22 and is again strained through the filter 15 and again sprayed through the spray-cocks 13, and is thus constantly used over and over again.

In warm weather ice may be kept in the tank for the purpose of keeping the water cool.

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

1. In a passenger-coach, the combination of the pipes 1, provided with the funnel ends 2; automatic valves 3, hinged in each end of the pipes; spray-cocks 13, secured in said pipes just below the valves 3; perforated vertical pipes 5, running up on the inside of the coach and one, between each window from pipes 1; pipes 22, extending from the lower part of pipes 1, down into the bottom of the tank 14; tank 14, secured to the bottom of the coach; filter 15, secured midway in said tank; pump 16, connected with tank 14, and secured to the bottom of the coach and adapted to be operated by a drive-wheel 19, on one of the coach-axles 20; pipe 21, extending from pump 16, to the spray-cocks 13, and adapted to throw its contents into said spray-cocks 13, and through them into the pipes 1, substantially as shown and described and for the purposes set forth.

2. In a passenger-coach, the combination of the pipes 1, provided with the funnel ends 2; automatic valves 3, hinged in each end of the pipes; spray-cocks 13, secured in said pipes just below the valves 3; perforated vertical pipes 5, running up on the inside of the coach and one, between each window from pipes 1; doors 6, adapted to close the perfo-

rations in pipes 5; pipes 22, extending from the lower part of pipes 1, down into the bottom of the tank 14; tank 14, secured to the bottom of the coach; filter 15, secured midway in said tank; pump 16, connected with tank 14, and secured to the bottom of the coach and adapted to be operated by a drive-wheel 19, on one of the coach-axles 20; pipe 21, extending from pump 16, to the spray-cocks 13, and adapted to throw its contents into said spray-cocks 13, and through them into the pipes 1, substantially as shown and described and for the purposes set forth.

3. In a passenger-coach, the combination of the pipes 1, provided with the funnel ends 2; automatic valves 3, hinged in each end of the pipes; spray-cocks 13, secured in said pipes just below the valves 3; perforated vertical pipes 5, running up on the inside of the coach and one, between each window from pipes 1; pipes 22, extending from the lower part of pipes 1, down into the bottom of the tank 14; tank 14, secured to the bottom of the coach; filter 15, secured midway in said tank; pump 16, connected with tank 14, and secured to the bottom of the coach and adapted to be operated by a drive-wheel 19, on one of the coach-axles 20; pipe 21, extending from pump 16, to the spray-cocks 13, and adapted to throw its contents into said spray-cocks 13, and through them into the pipes 1; tube 7, running along the top of the coach; pipes 8, connected with said tube, and, one, running down between each window of said coach; doors 9, adapted to close the lower ends of said pipes; pipe 10, connected with tube 7, and running up through the top of the coach suction-elbow 11, pivoted on the upper end of said pipe 10, substantially as shown and described and for the purposes set forth.

GEORGE WASHINGTON GARRETT.

Witnesses:

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