

(No Model.)

J. McGARRY.
CAR VENTILATOR.

No. 561,945.

Patented June 9, 1896.

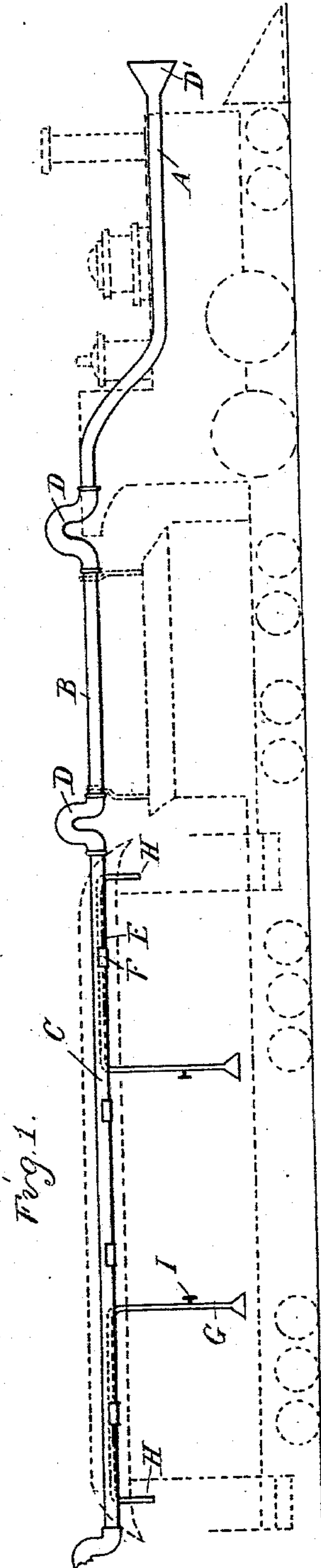


Fig. 1.

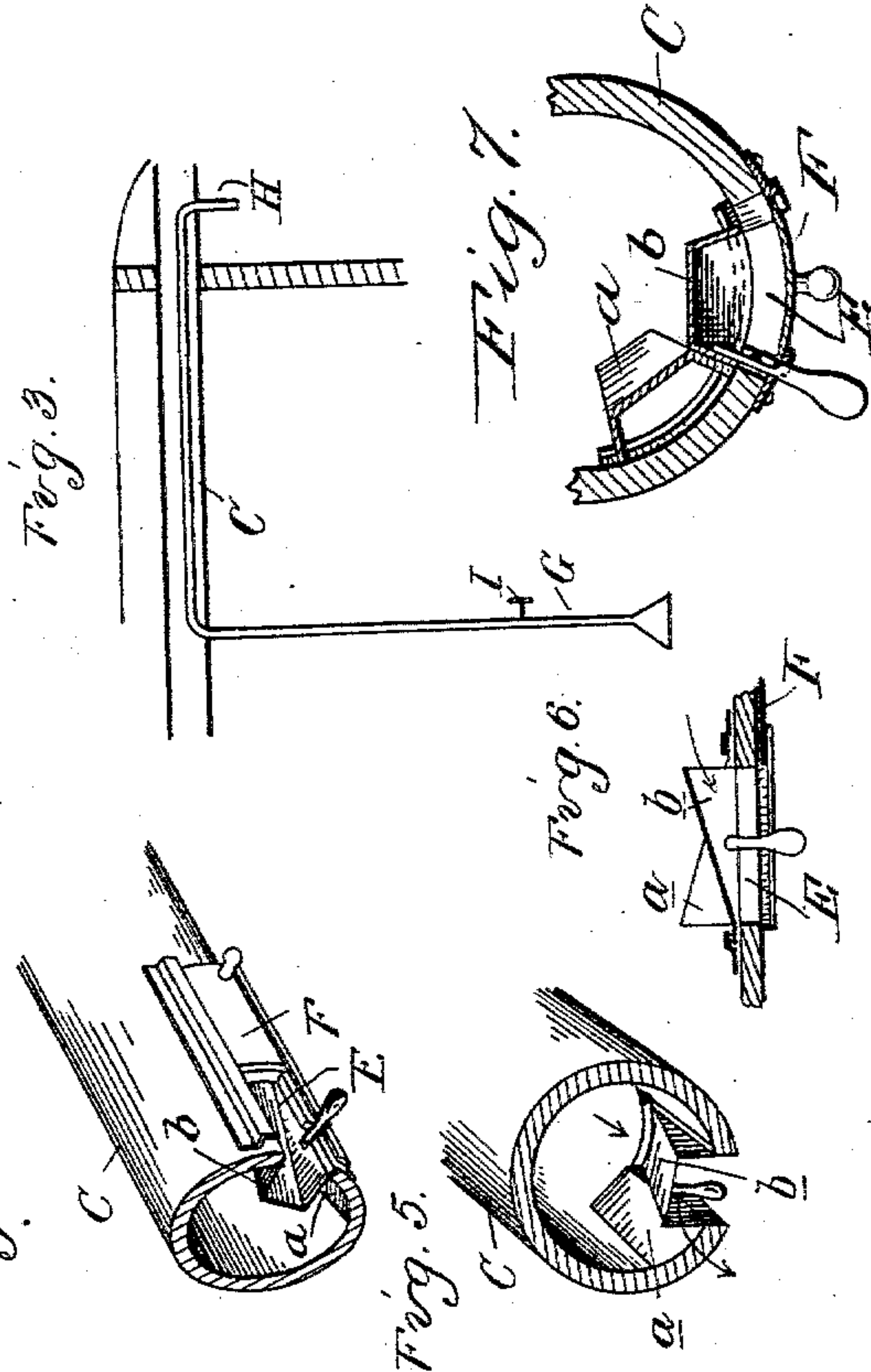


Fig. 3.

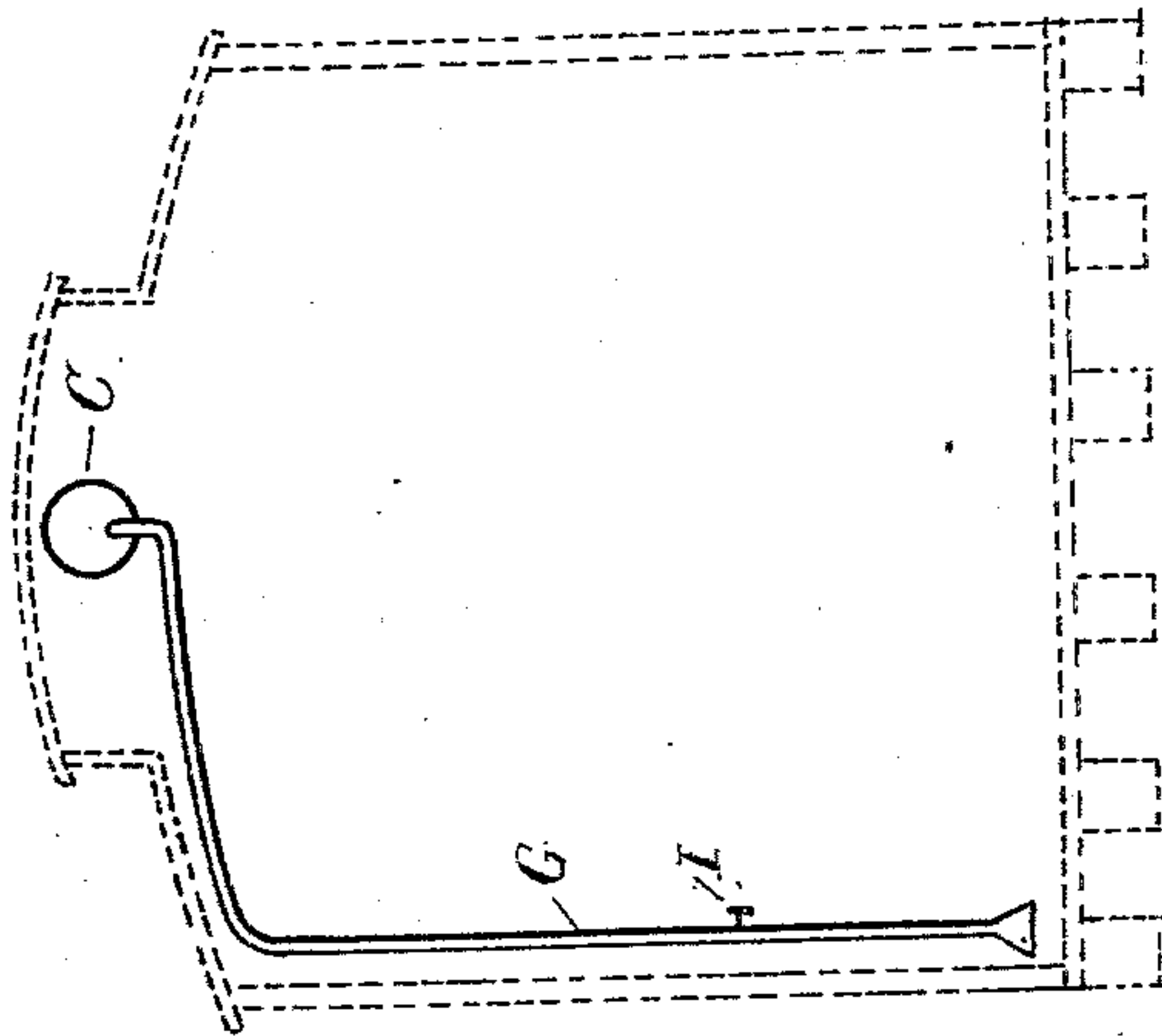
Fig. 7.

Fig. 4.

Fig. 6.

Fig. 5.

Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES MCGARRY, OF BAY CITY, MICHIGAN.

CAR-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 561,945, dated June 9, 1896.

Application filed June 17, 1895. Serial No. 553,119. (No model.)

To all whom it may concern:

Be it known that I, JAMES MCGARRY, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Car-Ventilators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in a ventilator for railway-trains, and especially in the construction of a ventilator-pipe extending from a funnel in front of the locomotive over or through the train, flexible couplings between the cars, valve-controlled openings from the
15 pipe into the car, and exhaust-pipes leading from the bottom of the car through this pipe to the outside, and, further, in the construction and arrangement of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is an elevation of my apparatus, showing in dotted lines the locomotive and one car of a railway-train. Fig. 2 is a vertical section through one of the
25 exhaust-pipes. Fig. 3 is a longitudinal section illustrating the construction and arrangement of such pipe. Fig. 4 is a sectional perspective view illustrating the construction and location of the valves in the ventilator-
30 pipe. Fig. 5 is a similar view illustrating the construction of deflector-nozzles intended to effect the forcing of the air into the car or to draw the air out of the car by a current passing through the ventilator-tube. Fig. 6 is a
35 longitudinal section through one of said deflectors, illustrating their construction. Fig. 7 is a cross-sectional view taken through the deflectors and showing the gate closing the aperture in the pipe.

40 A is a section of pipe on the locomotive, B on the tender, and C on the cars. These pipe-sections are detachably connected together at their ends by means of the inverted-U-shaped flexible coupling-sections D. The forward
45 end of the locomotive-section in front thereof is provided with an enlarged funnel D'.

The pipe-section through the car passes beneath the roof and at the end of each car passes through the roof, as shown. Within
50 the car, and preferably upon the bottom, the pipe is provided with apertures E, controlled by sliding valves or gates F. Inside the pipe

are the oppositely-inclined hood-shaped deflectors *a b*, preferably connected together and adapted to be moved around the inner
55 face of the pipe, so that either one of these deflectors may be arranged over the aperture. To the dividing-partition of each of the deflectors *a b* is secured an operating-handle *c*, extending through the aperture E. In the
60 side wall of the aperture E and also in the adjacent track for the sliding gate F is a depression or notch *d*, into which the handle *c* is adapted to be pressed out of the path of
65 the sliding gate F, when the latter can be slid in its track to close the aperture E. The air through the pipe passes in the direction of
70 the arrow, as shown in Fig. 5. If the deflector *a* is over the aperture, it will catch and deflect the air into the car, while if the deflector *b* is arranged over the aperture the air passing
over the deflector will act somewhat on the principle of an injector and draw the air from
75 the car into the pipe and out through the rear end thereof. Thus I am enabled to utilize the force of the passing current through the ventilator-pipe, either to force air into the car or to draw air therefrom.

As it is desirable to take out the impure air near the floor, I arrange the exit-pipes G at
80 suitable points in the car, having open lower ends and extending to the top of the car and into the ventilator-pipes, passing out through that pipe at the end of the car and terminating in a nozzle or open end H just outside the
85 end of the car. One of these pipes extends to each end. These pipes may be provided with suitable dampers I. When the car is in motion, if the forward pipe G is open air is forced therein by the motion of the train and
90 will discharge in the car near the floor, while the air will be taken from the floor through the rear pipe and discharged at the rear end thereof. Thus, no matter which way the car is going, my construction provides a proper
95 ventilation for taking air in at the floor and at the roof and for drawing the air out of the car at both points.

What I claim as my invention is—

1. The combination with a railway-car, of
100 a ventilator-pipe passing therethrough near the roof having apertures therein, and deflectors each having a sliding engagement with the pipe and provided with oppositely-

arranged hoods adapted to separately register with and control the said apertures, substantially as described.

2. The combination with a railway-car, of
5 a ventilator-pipe passing therethrough near the roof having apertures therein, deflectors each having a sliding engagement with the pipe and provided with oppositely-arranged hoods *a b* adapted to separately register with

and control said apertures, and valves *F* for to said apertures, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES MCGARRY.

Witnesses:

T. E. WEBSTER,
CORA R. BIALY.