

A. BELL.

WATER-CLOSET OF RAILWAY-CARS.

No. 175,909.

Patented April 11, 1876.

Fig. 1.

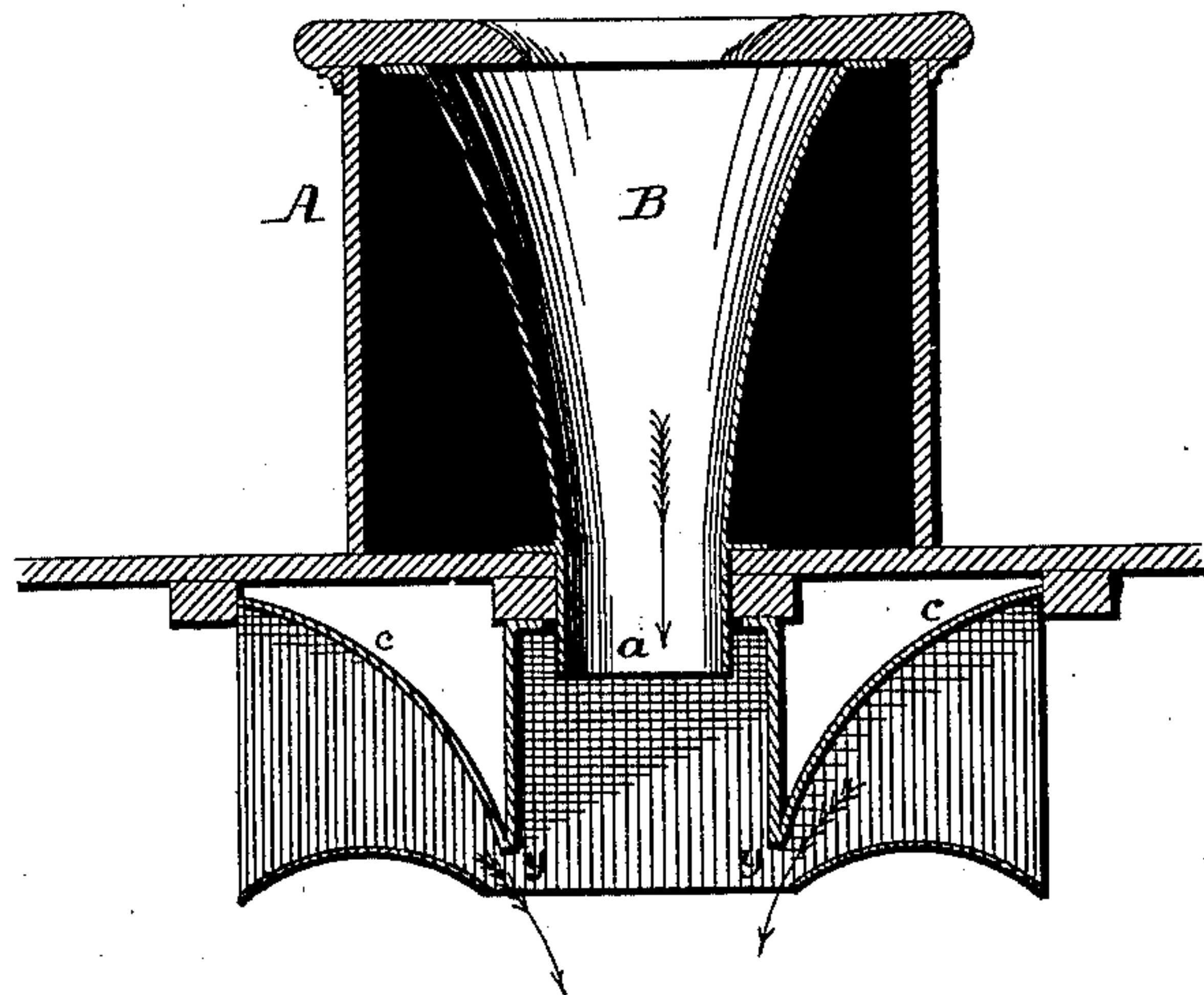
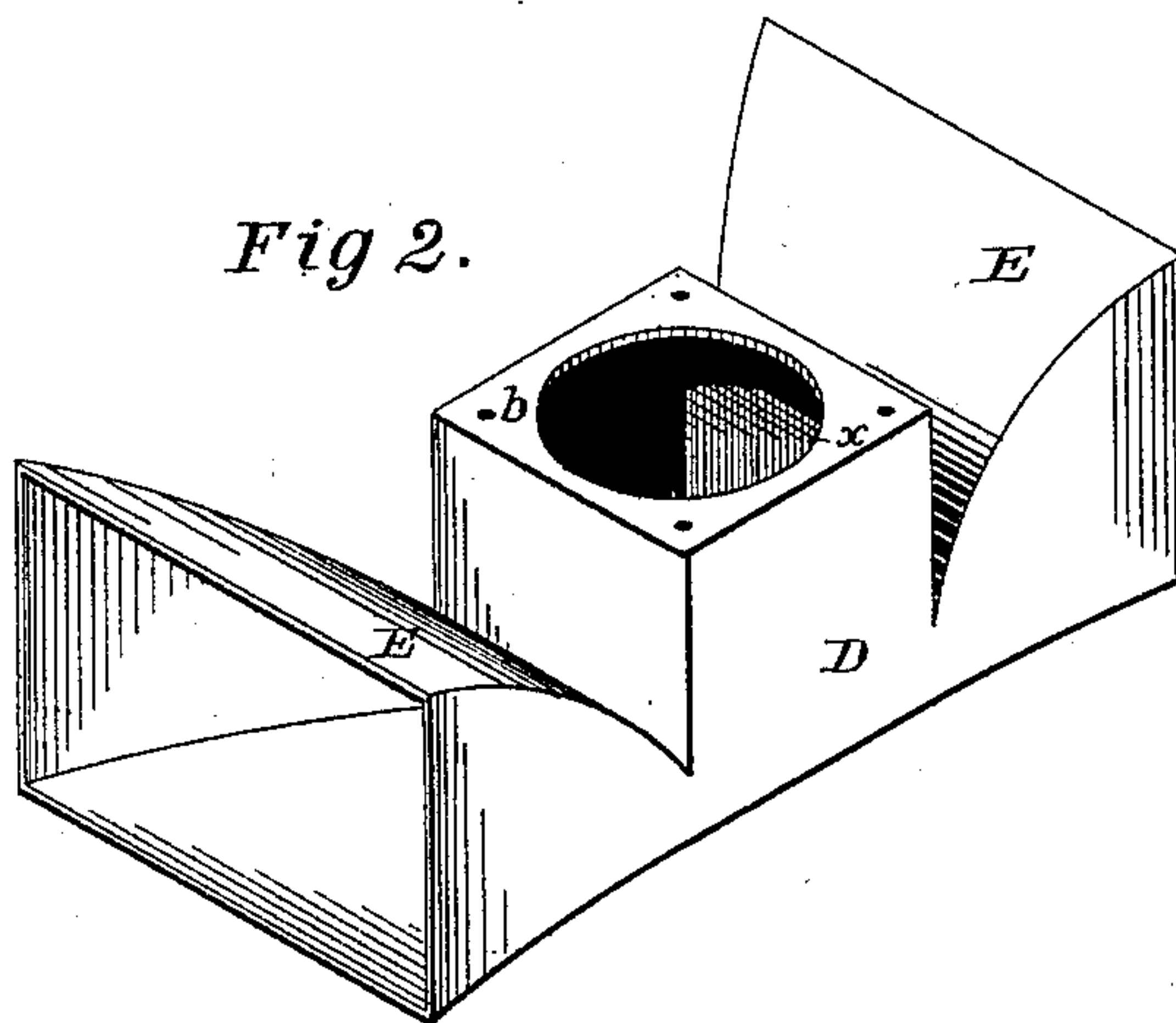


Fig 2.



Attest:

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UNITED STATES PATENT OFFICE.

ALONZO BELL, OF NEW YORK, N. Y.

IMPROVEMENT IN WATER-CLOSETS OF RAILWAY-CARS.

Specification forming part of Letters Patent No. **175,909**, dated April 11, 1876; application filed April 1, 1876.

To all whom it may concern:

Be it known that I, ALONZO BELL, of the city, county, and State of New York, have invented Improvements in Water-Closets of Railway-Cars, of which the following is the specification:

The object of my invention is to prevent upward currents of air in the water-closets of railway-cars, and this object I effect by creating a downward or cross current adjacent to the lower end of the pipe leading from the basin.

In the accompanying drawing, Figure 1 is a sectional elevation, showing the seat, basin, and discharge-pipe of a water-closet as arranged in a railway-car, with a device which I employ for preventing upward currents of air; Fig. 2, a perspective view of the device detached.

In railway-cars the seat A and basin B of the water-closet are arranged as in dwellings; but the discharge-pipe *a*, instead of being sealed by a trap, is open at the lower end, permitting the ascent of currents of air, (often carrying dust and cinders,) which are both disagreeable and injurious to the health of those obliged to use the closet.

To obviate this difficulty I employ, in connection with the closet, appliances for creating a downward or transverse current of air adjacent to the lower end of the discharge-pipe *a*, tending to create a vacuum therein, and consequently insuring a downward current within the basin, effectually preventing the access of dust and cinders, and the evils resulting from currents in a contrary direction.

Various means may be adopted for effecting this result. For instance, one or more funnels may be arranged at the top or side of the car to collect the air, a pipe leading from the funnel to discharge the air downward adjacent to the mouth of the pipe *a*. I prefer, however, to employ a cowl. (Illustrated in the drawing.)

The cowl consists of a box, D, open at the bottom, having a flange, *b*, at the top, for bolting to the under side of the car, an opening, *x*, to receive the end of the pipe *a*, at opposite sides funnels E E, with wide open mouths, inclined tops *c*, and narrow throats *y* near the bottom of the box.

The movement of the car in either direction causes the air to pass into the forward funnel, the inclined top *c* of which deflects it, so that it is discharged downward directly beneath the pipe *a*, creating the desired downward current in the latter.

It will be apparent that the cowl, constructed as shown and described, may be applied directly to any car now in use by simply bolting it to the bottom, in the position shown in Fig. 1.

Instead of the cowl described, inclined plates may be arranged at any or all the sides of the discharge-tube, so as to deflect the air and create a downward or cross current below the tube *a*.

I claim—

1. The combination of the water-closet basin of a railway-car and appliances for conducting air to, and discharging it below or across, the discharge-pipe of the basin, as set forth.

2. A cowl provided with one or more deflecting funnels or vanes inclined toward the open bottom, having an opening at the top for receiving the discharge-pipe *a*, and adapted for application to a railway-car below the said discharge-pipe, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALONZO BELL.

Witnesses:

CHARLES E. FOSTER,
FRANK M. GREEN.