

T. F. STRONG.  
Car Heater and Ventilator.

No. 32,726.

Patented July 2, 1861.

Fig. 1

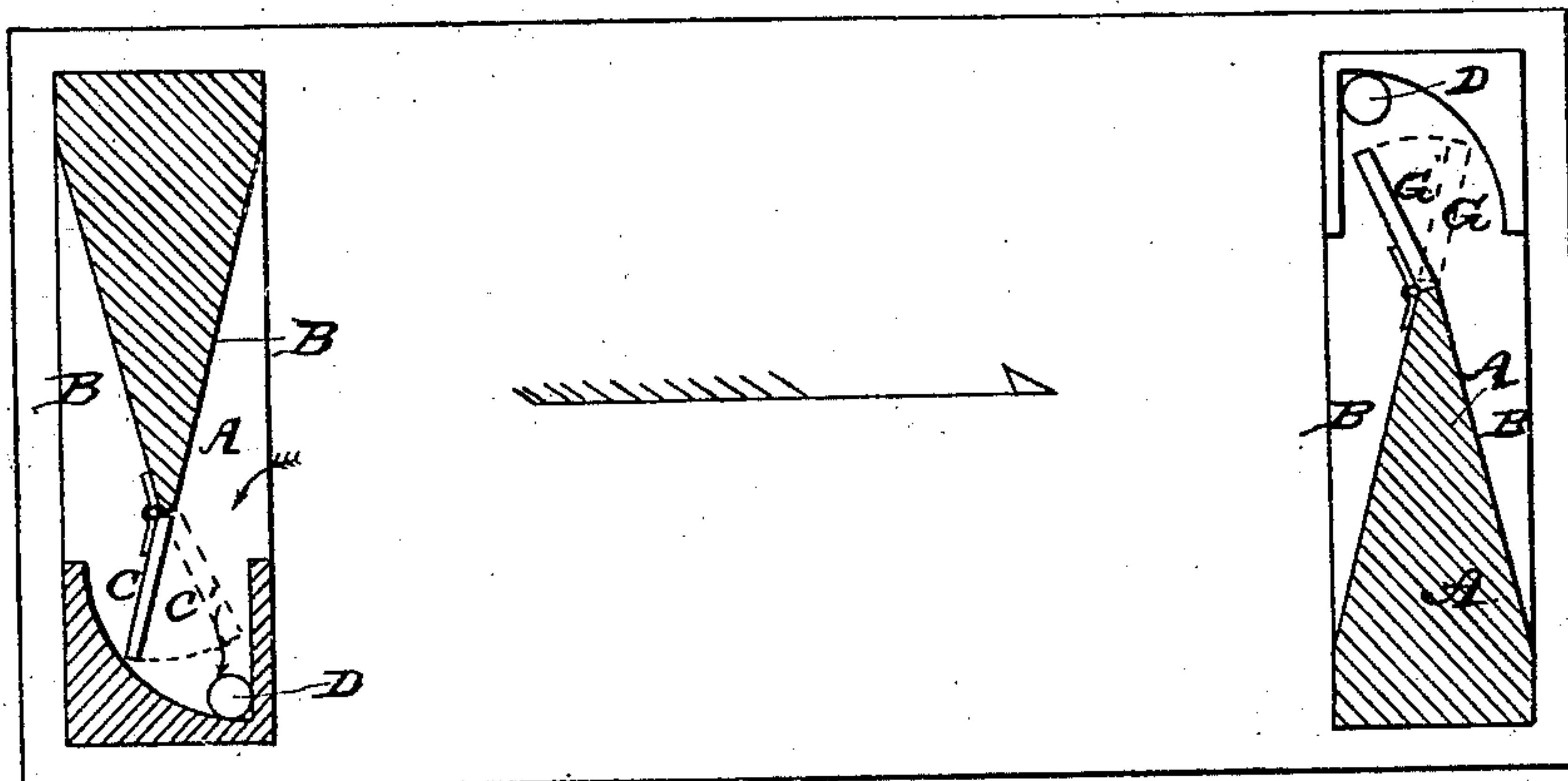


Fig. 2.

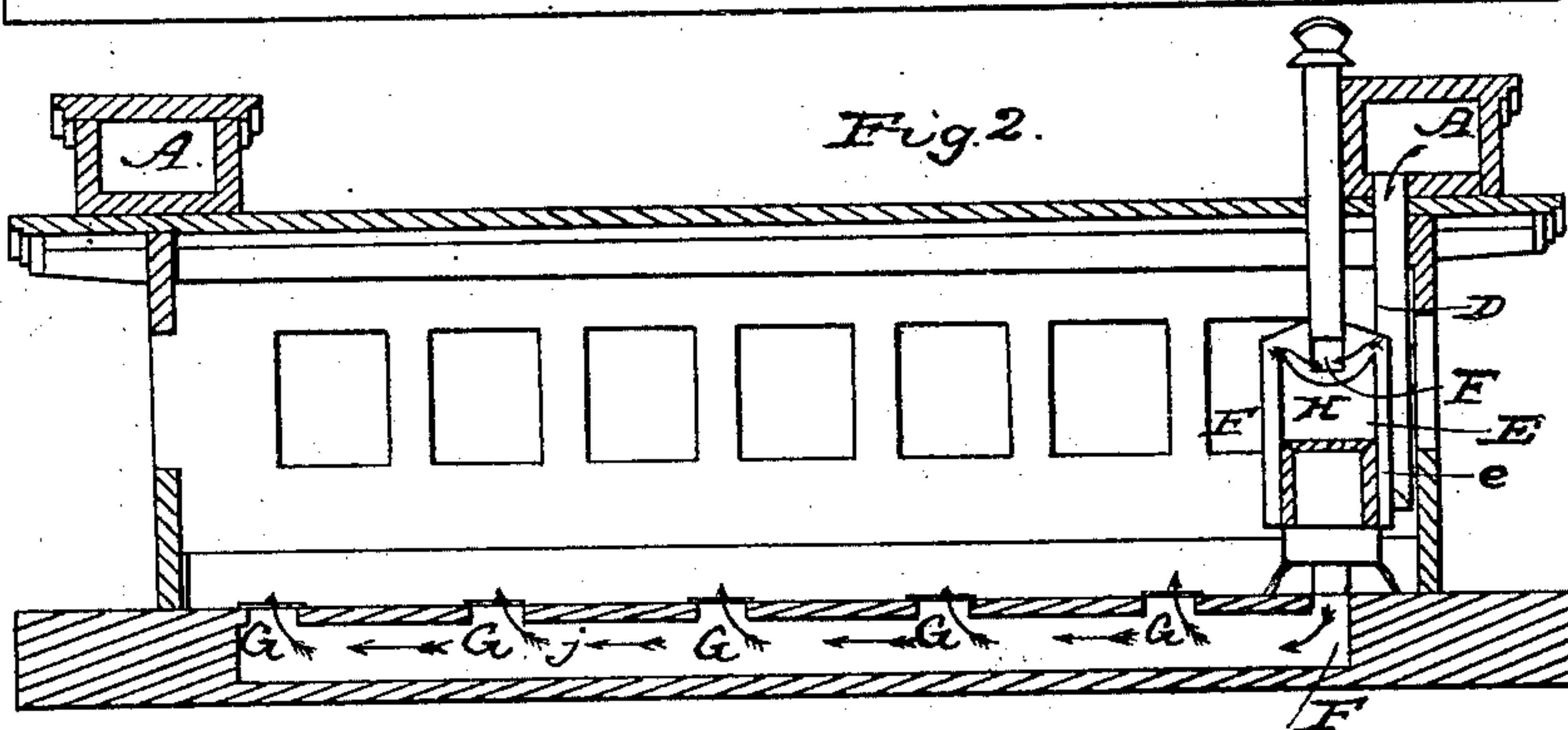
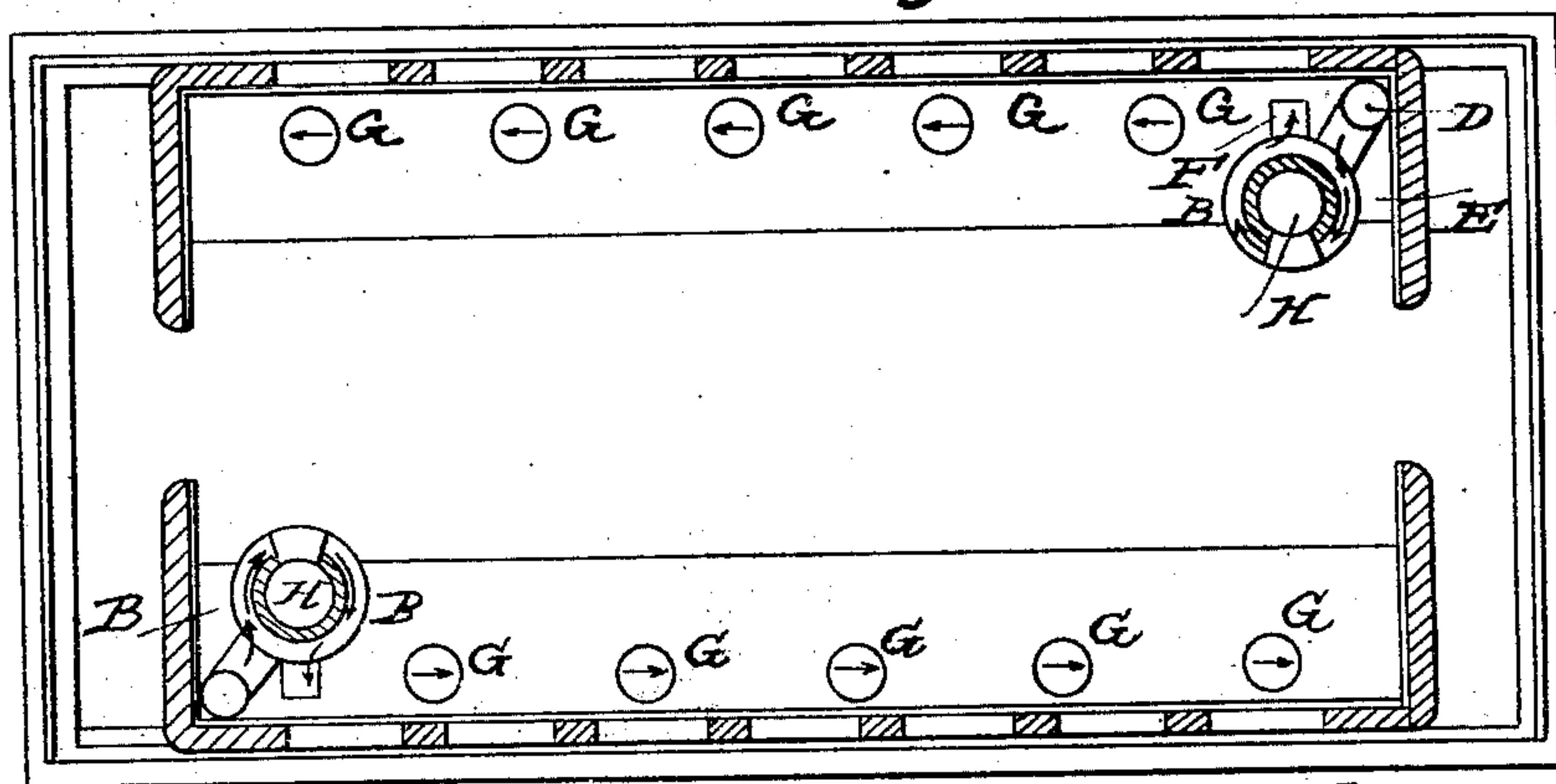


Fig. 3



Witnesses  
A. A. Yeakman.

Inventor  
T. F. Strong  
per C. H. Alexander  
Att'y

# UNITED STATES PATENT OFFICE.

TIMOTHY F. STRONG, OF FOND DU LAC, WISCONSIN.

## APPARATUS FOR HEATING AND VENTILATING RAILROAD-CARS.

Specification of Letters Patent No. 32,726, dated July 2, 1861.

*To all whom it may concern:*

Be it known that I, TIMOTHY F. STRONG, of the city and county of Fond du Lac, in the State of Wisconsin, have invented a new and useful Apparatus for Warming and Ventilating Railway-Cars; and I do declare that the following is a full and exact description thereof.

Reference is made to the accompanying drawing of which—

Figure 1 is a plan of the roof of a car. Fig. 2 is a vertical section through the heating apparatus. Fig. 3 is a plan of the floor.

The same parts are indicated by the same letters in all the figures.

Across each end of the car upon the roof I construct a hood or cowl A, A, partially closed in front and having for its back a flat or curved inclined mold-board B, B, by which when the car is in motion a current of fresh air is driven into the closed end of the hood and thence forced down a pipe D which conducts it to the hot air chamber E E of a heater within the car and that the motion of the car in either direction may produce the same result I make each hood double having a similar opening and mold-board on either side. The two mold-boards meet near the inner end of the hood and the inclined surface is prolonged by a valve or flap C C which is moved from one side to the other by the action of the air and by which that side of the hood which receives the current of air is kept constantly in communication with the inlet pipe D aforesaid. The volume of air which is thus gathered is forced into the hot air chamber of the heater at the bottom passes around and over the stove H and is received at the top of the heater by a pipe F which conveys it downward and along the floor of the car or between the floor timbers to registers open-

ing at each seat G G G either in the side or the floor of the car. The circuit of ventilation is completed by ordinary ventilators which take the foul air through the roof. Each hood communicates with a separate heater and system of hot and cold air flues which warms one side of the car.

The large arrow indicates the direction of the motion of the car, the small arrows that of the air passing through the apparatus.

I furnish the hot air cylinder E E with register in the top and bottom by which the car may be warmed when at rest as in the usual manner.

By this apparatus I obtain, 1, a constant current of fresh air as well in warm as in cold weather by which the impure air which is drawn out by the ventilators may be continually replaced and the air in the car be kept pure and sweet; 2, the maintenance of an equable and uniform temperature making all seats in the car equally comfortable whether near or remote from the stove; 3, I make the floor of the car and the feet of the passengers thoroughly warm.

Having thus fully described the nature and operation of my apparatus for warming and ventilating railway cars what I claim as new therein and desire to secure by Letters Patent is—

The combination of the hood with its inclined surface, and automatic valve, with the inlet pipe hot air chamber distributing pipe and registers when the several parts are constructed and arranged to operate in the manner and for the purpose herein set forth.

TIMOTHY F. STRONG.

Witnesses:

C. M. ALEXANDER,  
M. M. DOW.