D. CLARK.

AIR CIRCULATING SYSTEM FOR CARS.

APPLICATION FILED MAR. 29, 1918.

1,328,820.

Patented Jan. 27, 1920.

2 SHEETS—SHEET 1.

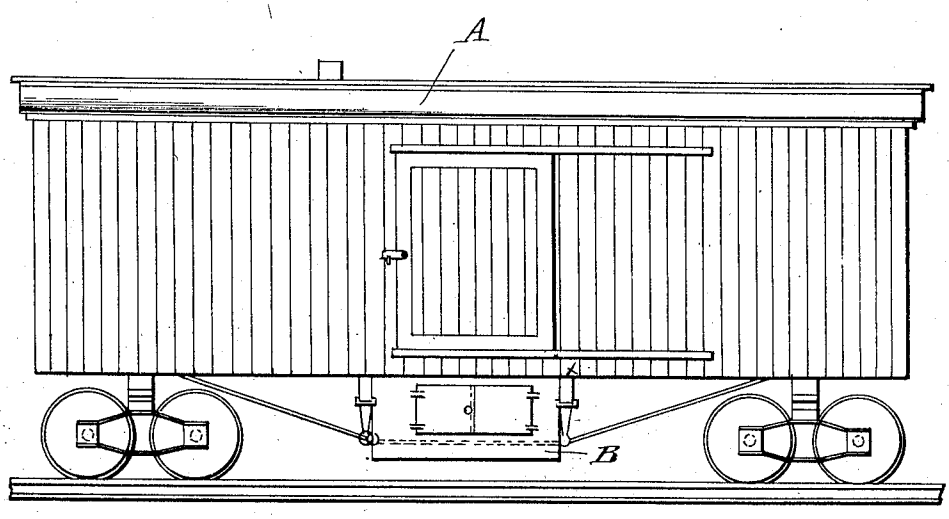


Fig. 1.

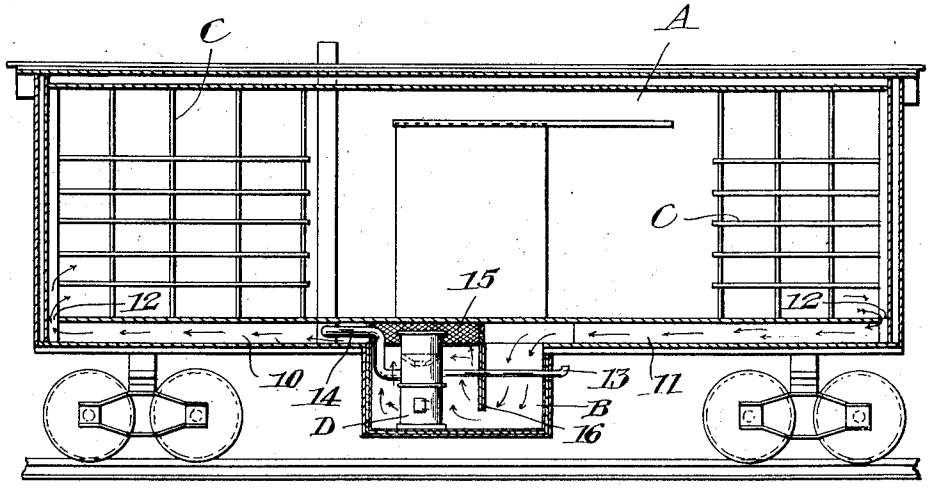


Fig. 2.

WITNESSES

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DANIEL CLARK.

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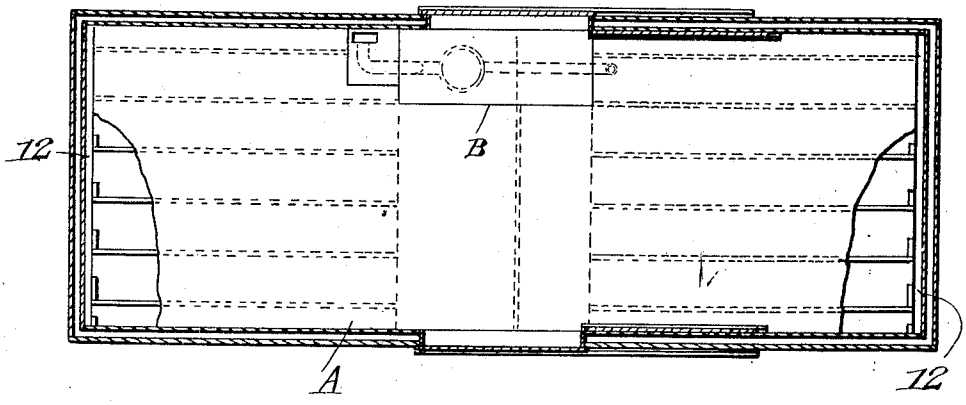


Fig. 3.

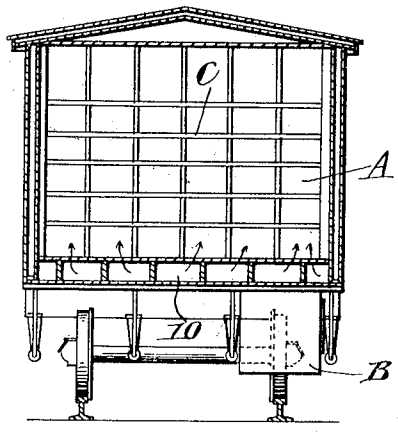


Fig. 4.

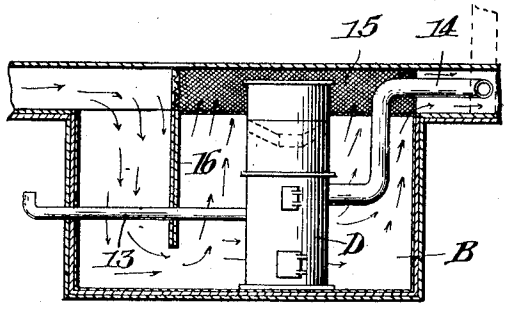


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

DANIEL CLARK, OF EDMONTON, ALBERTA, CANADA.

AIR-CIRCULATING SYSTEM FOR CARS.

1,328,820. Specification of Letters Patent. Patented Jan. 27, 1920.

Application filed March 29, 1918. Serial No. 225,498.

To all whom it may concern:

Be it known that I, DANIEL CLARK, a subject of the King of Great Britain, and resident of the city of Edmonton, in the Province of Alberta, Dominion of Canada, have invented certain new and useful Improvements in Air-Circulating Systems for Cars, of which the following is a specification.

This invention relates to improvements in air circulating systems for cars, and the objects of the invention are to provide a positive and effective circulation for warm air in cars, which may be applied to any ordinary box or grain car.

Further objects of the invention are to provide a positive but natural circulation which will continually circulate the air and it consists essentially of an arrangement by which a portion of the air is expanded by heat and forced in a given direction, a suitable return circuit being established at the lower part of the heating device, whereby a continuous and natural circulation of air will take place.

In the drawings:

Figure 1 represents a side elevation of the car.

Fig. 2 represents a longitudinal vertical section centrally of the car.

Fig. 3 is a section horizontally of the car above the floor line.

Fig. 4 is a cross section taken laterally showing the racks.

Fig. 5 is a sectional detail of the heating system taken longitudinally.

Like characters of reference refer to like parts in the several figures.

Referring to the drawings, A represents a car of any usual type which is in accordance with the present invention, formed with a dependent heating chamber B secured to the bottom of a car, and communicating on opposite sides with air spaces or passageways 10 and 11, which lead to the ends of the car, the passageway 10 being used for the supply of air, while the passageway 11 is used for the return thereof.

The air passes upwardly into the car at the end thereof, through ports or openings 12, and to maintain a clear space at the end of the car in which the air may circulate, racks C are built around the inside of the end and sides of the car, these racks comprising spaced, vertical and horizontal members, constituting a lattice work, and forming channels for the effective distribution of the air.

D represents a heater located in the chamber, supplied with fresh air from a conduit 13, and provided with a suitable smoke pipe 14.

The heated air, before passing into the passageway 10, is strained by a screen 15, and the return air passing out of the conduit 11 is deflected downwardly by a baffle plate 16.

It will be seen that the present invention provides for a very simple and effective form for a warm air circulation, which may be readily applied to any type of car, the floor as well as the other parts of the car, is maintained at a uniform temperature, and owing to the constant circulation of the air conditions of both moisture and temperature will be uniform throughout.

For the sake of illustration I have shown the invention embodied in one form of apparatus but it should be understood that the invention refers broadly to an arrangement in which a positive circulation of air is caused to take place in a continuous circuit, the return air being fed to the bottom of the heating means and the outflowing air passing through the upper part of the heating means, thence to the car.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention within the scope of the claims, constructed without departing from the spirit or scope thereof, it is intended that all matter contained in the accompanying specification and drawings form part of the same.

What I claim as my invention is:

1. A car having a heating chamber, air conduits extending along the bottom of the car to opposite ends thereof, and serving for the passage of air to and from the heating chamber, said conduits being provided with suitable discharge ports at the end of the car, and racks on the interior walls of the car, forming air circulating spaces.

2. A car having a heating chamber, air conduits extending along the bottom of the car to opposite ends thereof, and serving for the passage of air to and from the heating

chamber, said conduits being provided with suitable discharge ports at the ends of the car, and racks on the interior walls of the car forming air circulating spaces, said racks being formed of spaced, vertical and horizontal members constituting a lattice work.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

DANIEL CLARK.

Witnesses:
A. G. BROWNING,
G. EASTON.