No. 645,829. Patented Mar. 20, 1900.

J. PLAYER.

COMBINED REFRIGERATING AND VENTILATING CAR.

(Application filed Nov. 8, 1897.)

(No Model.) 2 Sheets—Sheet 1.

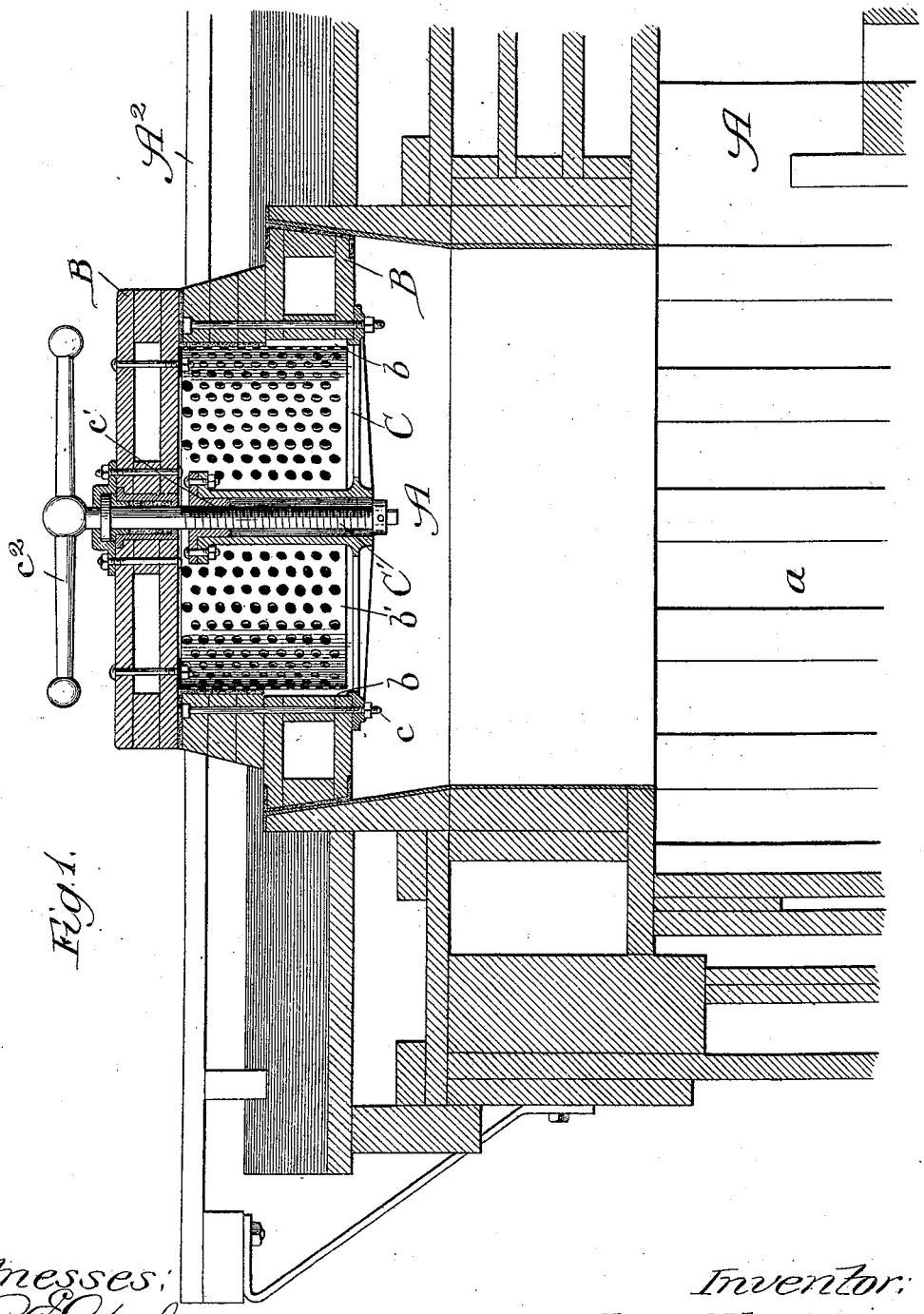


Fig. 1.

Witnesses:
Chas. E. Gaylord.
Luke S. Potts.

Inventor:
John Player,
By Banning & Banning & Sheridan,
Attys.

No. 645,829. Patented Mar. 20, 1900.

J. PLAYER.

COMBINED REFRIGERATING AND VENTILATING CAR.

(Application filed Nov. 8, 1897.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

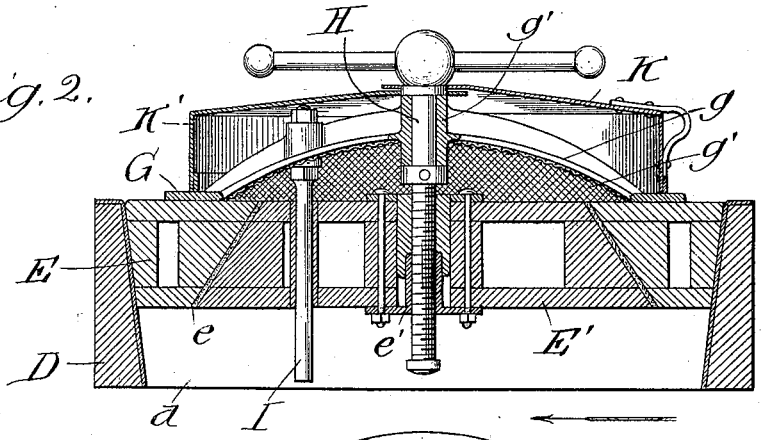


Fig. 3.

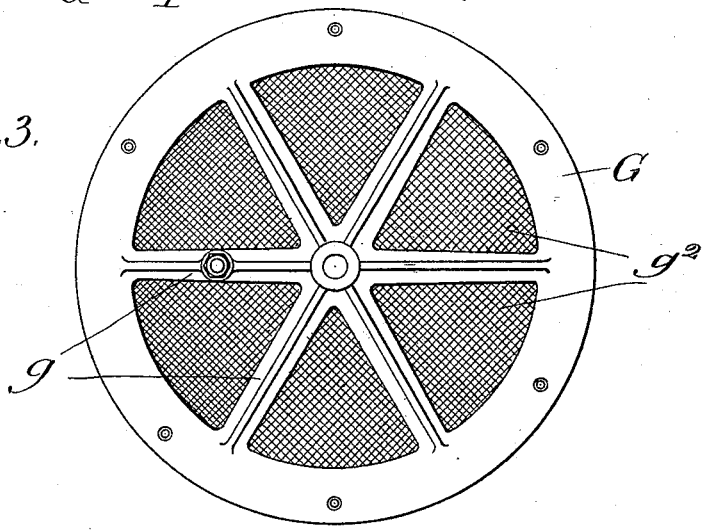
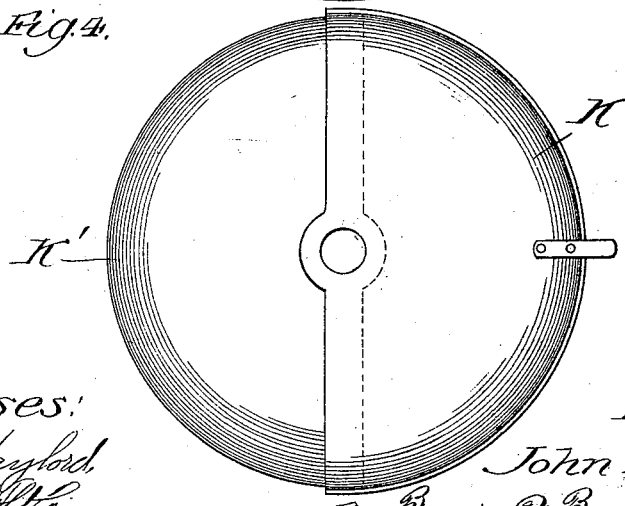


Fig. 4.



Witnesses:
Chas. E. Gaylord.
Peter B. Mellen.

Inventor.
John Player,
By Banning & Banning & Sheridan,
Attys.

UNITED STATES PATENT OFFICE.

JOHN PLAYER, OF TOPEKA, KANSAS.

COMBINED REFRIGERATING AND VENTILATING CAR.

SPECIFICATION forming part of Letters Patent No. 645,829, dated March 20, 1900.

Application filed November 8, 1897. Serial No. 657,796. (No model.)

To all whom it may concern:

Be it known that I, JOHN PLAYER, a citizen of the United States, residing at Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in a Combined Refrigerating and Ventilating Car, of which the following is a specification.

The object of my invention is to provide a simple, economical, and efficient combined refrigerating and ventilating car; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of the upper portion of a refrigerating-car fitted with my improvements; Fig. 2, a vertical sectional elevation of a modified form of plug for the ice-opening and constructed in accordance with my improvements; Fig. 3, a plan view of the screen and its supporting-spider, and Fig. 4 a plan view of the inclosing case.

In constructing a car and fitting it with my improvements I use a car-body A of the desired size and shape, which is provided with an ice-tank *a* at each end thereof. This car is provided with the usual insulated end, side, roof, and bottom portions. In the roof portion it is provided with the usual hatch-opening A′, through which the ice is inserted into the ice-tank of the car. These ice-openings are preferably located one at each side of the central running-board A^2. To close these ice-openings (see Fig. 1) in such a manner that ice may be inserted whenever it is deemed desirable or necessary, as well as to provide for the admission of air for ventilating purposes without removing the plug, I make an ice-plug in two portions—a plug portion proper, B, which closely fits the ice-opening and which is provided with a central air-opening *b* therethrough. This plug is removably fixed in position—that is, it enters the ice-opening in a wedge-shaped manner, so that it may be easily removed whenever it is necessary to fill the ice-tank and easily replaced whenever it is necessary so to do. To open and close the air or ventilating opening through the plug, I provide a vertical movable cover portion B′, which has a portion that telescopically fits the air-opening of the plug by means of a piece of reticulated material (metal or wire mesh) *b*′. A spider C is secured to the plug by means of the bolts *c* and is provided at its central hub portion with a nut *c*′, with which a bench-screw C′ engages. The handle c^2 of the bench-screw projects above the cover proper, B′, so that it may be turned whenever it is desirable and the cover, with its reticulated portion, raised. When such cover is raised and the car is in motion, the air will enter through the perforations in the screen and enter the car for the purposes of ventilation. Whenever it is desirable to use the car simply as a refrigerator-car, the screw is turned in the desired direction and the cover closed.

Describing the modifications shown in Figs. 2, 3, and 4, the hatch D of the car-roof is provided with an ice-opening *d*. This opening is provided with a plug made in practically two portions, one portion E forming the plug proper and fitting the ice-opening, which in turn is provided, preferably, with a tapered opening *e*, through which the air may enter the car whenever it is desirable to ventilate the car. This plug portion proper is provided with an arched spider portion G, having its arms *g* connected with a central hub portion *g*′, forming the bearing for a bench-screw H. The spaces between this spider portion are filled with a screen of reticulated material g^3, formed of either a wire mesh or perforated metal, which serves to prevent the entrance of dirt and large substances into the car. To close the air-opening in the plug proper, the second portion of the plug E′ is made to closely fit the air-opening and is provided with a nut *e*′ in threaded engagement with the bench-screw, so that if such screw is turned in one direction the part E′ is moved vertically to uncover the air-opening in the plug. When the bench-screw is turned in the other direction, such part is vertically moved again to close the air-opening. A stud or pin I is provided and rigidly secured to the spider portion and extends through an opening in the vertical movable portion of the plug, so as to prevent such plug from having a rotary motion. To inclose the projecting portion of the ice-plug an inclosing case is pro-

vided, made in two semicircular portions K and K′, rotatably mounted, so that the portion K will inclose the portion K′. When the car is moving in the direction of the arrow, (see Fig. 2,) the part K′ is swung around into engagement with the part K, so that air may enter through the opening left by it and pass down through the screen into the car. When the car is moving in the opposite direction, the part K is swung around so as to cover the part K′ and enable the air to enter from the opposite direction. If desirable, the screen *g′* may be dispensed with and one or both portions of the inclosing case K and K′ be perforated, as may be deemed desirable.

While I have described my invention with more or less minuteness as regards form, construction, and arrangement, I do not desire to be limited strictly thereto or any more than is pointed out in the claims. On the contrary, I contemplate all proper changes in form, construction, and arrangement, the omission of immaterial elements and the substitution of equivalents, as circumstances may suggest or necessity render expedient.

I claim—

1. In a combined refrigerating and ventilating car, the combination of a car-body provided with a hatch-opening in the roof thereof and a removable plug, consisting of an outer rim or body portion fitting the hatch-opening and having an air-opening within the rim or body and a second portion vertically movable on the rim or body portion and entering the air-opening thereof and a screen carried by one of said portions, whereby the plug as an entirety can be removed to open the hatch-opening and the central portion can be moved for the admission of air, substantially as described.

2. In a combined refrigerating and ventilating car, the combination of a car-body provided with an ice-tank at the end thereof and an ice-hole in the roof of the car over such ice-tank, a removable plug, consisting of an outer rim or body portion fitting the ice-hole and having a central air-opening and a central portion vertically movable on the rim or body portion and entering the air-opening of such portion to open and close the same and a screen on one of such portions, and means for moving the central portion, substantially as described.

3. In a combined ventilating and refrigerating car, the combination of a car-body provided with an ice-tank at the end thereof and an ice-hole in the roof of the car over such tank, a removable plug for such ice-hole made in at least two portions—one portion fitting such ice-hole and the other portion vertically and movably secured to the same so as to open and close the air-opening, a screen in one of such portions to prevent the entrance of dirt or large bodies into the car when the air-hole is opened, and a casing for such plug adapted to completely inclose the projecting portion of the same, substantially as described.

4. In a combined refrigerating and ventilating car, the combination of a car-body provided with an ice-tank at each end thereof and an ice opening or openings in the roof of the car over such tanks, a removable plug in such ice-openings made in at least two sections, one section fitting the ice-opening and the other vertically and movably secured to the same so as to open and close an air-opening through the plug, a screen on one of such portions, and an inclosing case for such plug made of two semicircular portions adapted to rotate and one be inclosed by the other portion so as to present an opening for the plug in the desired direction, substantially as described.

5. In a combined refrigerating and ventilating car, the combination of a car-body provided with an ice-tank at each end thereof, an ice opening or openings in the roof of the car over such tanks, a removable plug for each opening consisting of an outer rim or body portion having a central air-opening and a central portion vertically movable on the outer rim or portion entering the air-opening thereof, a rotating screw for operating the movable portion of the plug for opening and closing the air-opening therein, and a screen on one of the plug portions, substantially as described.

JOHN PLAYER.

Witnesses:
THOMAS F. SHERIDAN,
THOMAS B. MCGREGOR.