

(No Model.)

2 Sheets—Sheet 1.

J. H. DYERSON.  
REFRIGERATOR CAR.

No. 532,651.

Patented Jan. 15, 1895.

Fig. II.

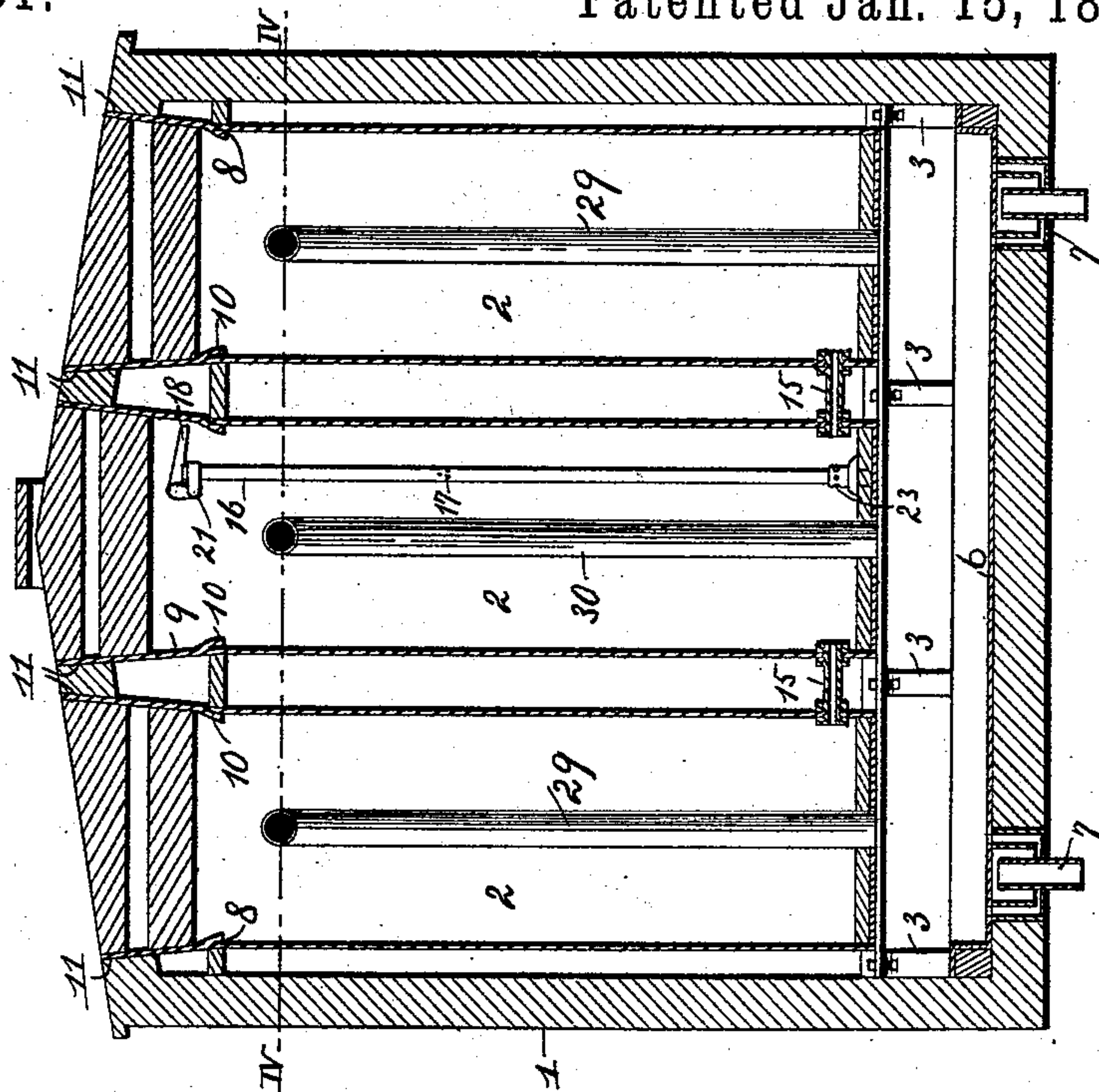
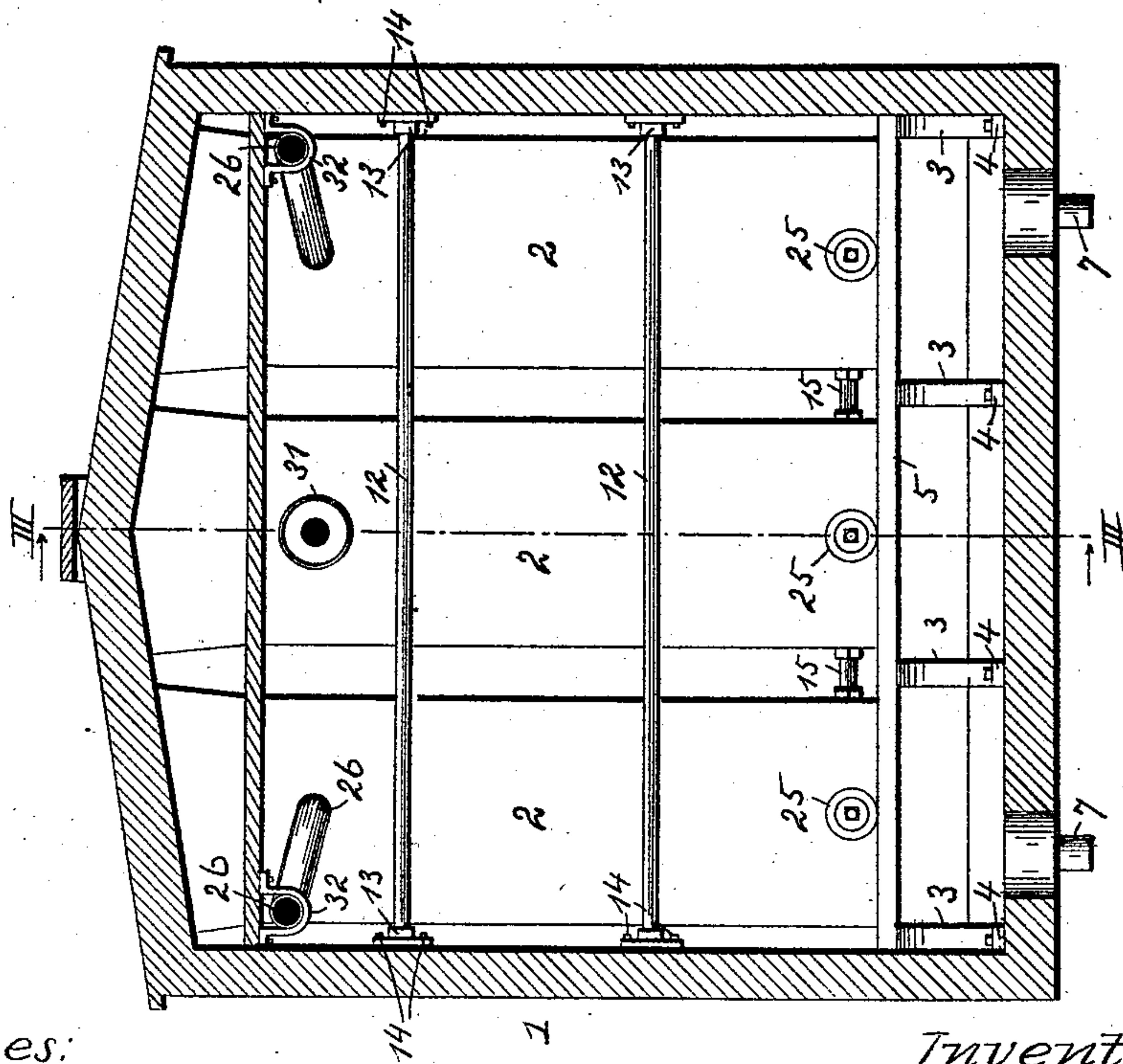


Fig. I.



Witnesses:  
F. G. Fischer  
R. L. Silverman

Inventor:  
John H. Dyerson  
By *Wm. R. B. W.* Attys.

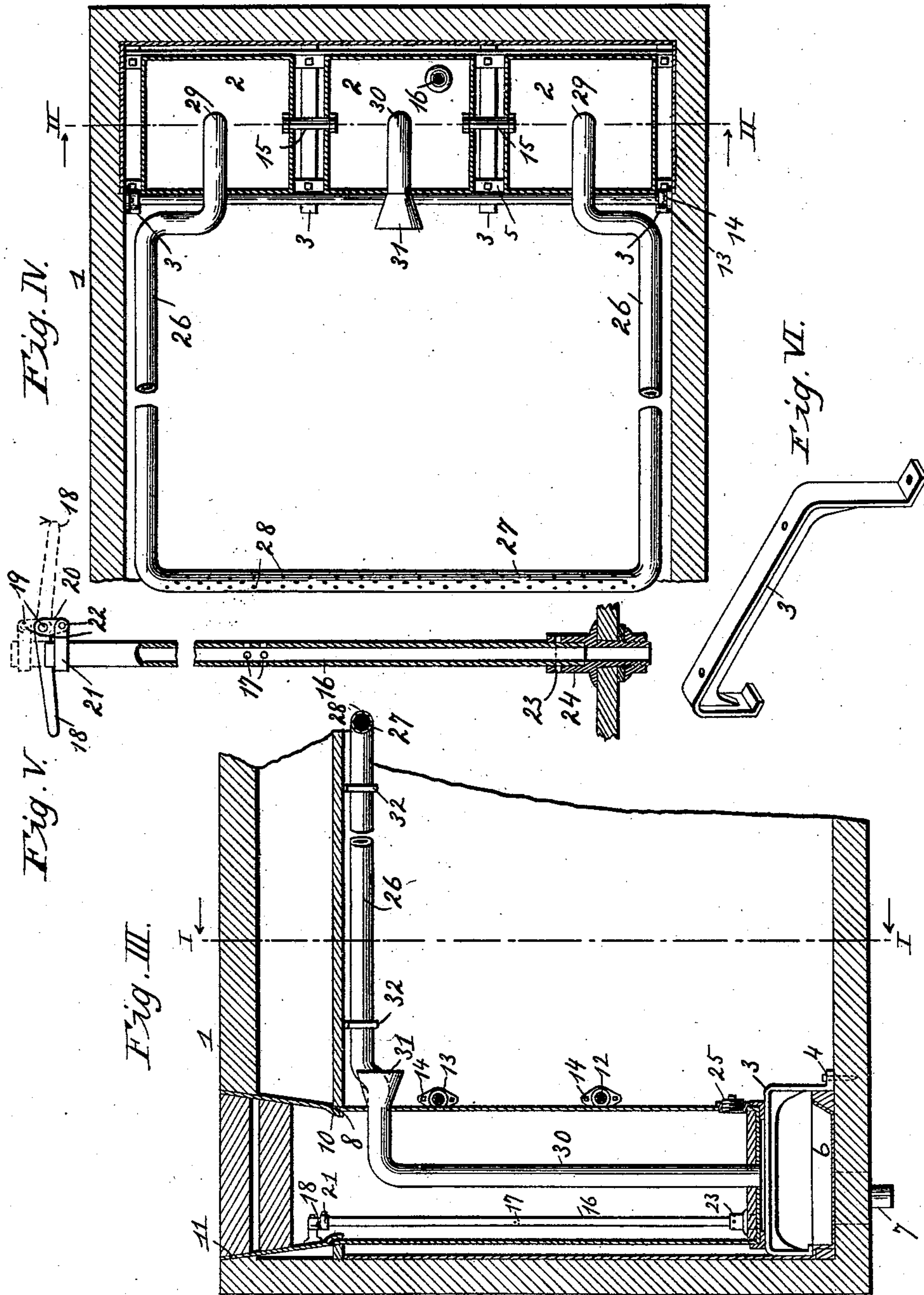
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John H. Dyerson  
By *Amie R. Brown*  
Attys.



# UNITED STATES PATENT OFFICE.

JOHN H. DYERSON, OF KANSAS CITY, KANSAS.

## REFRIGERATOR-CAR.

SPECIFICATION forming part of Letters Patent No. 532,651, dated January 15, 1895.

Application filed October 17, 1893. Serial No. 488,399. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. DYERSON, of Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Refrigerator-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in refrigerator cars and my invention consists in certain features of novelty hereinafter described and pointed out in the claim.

Figure I represents a section of a car taken on line I, I of Fig. III, showing my improved tanks in position. Fig. II represents a section taken on line II, II of Fig. IV. Fig. III is a section taken on line III, III of Fig. I. Fig. IV is a section taken on line IV, IV of Fig. II. Fig. V is an enlarged detail view showing the overflow pipe partially in full lines and partially in sections. Fig. VI is an enlarged perspective view of one of the benches for supporting the ice tanks.

Referring to the drawings: 1 represents a refrigerator car with my improved refrigerating apparatus placed therein.

2 represents a series of tanks intended for holding ice for the purpose of cooling the car.

3 represents a series of iron benches having a foot piece 3<sup>a</sup> secured to the bottom of the car as shown at 4, the vertical arm 4<sup>a</sup>, the horizontal portion 4<sup>b</sup> extending laterally under the tanks and reinforced on its under side by the rib 4<sup>d</sup>, and the vertical arm 4<sup>c</sup> resting a block at the end of the car. Said benches support transversely extending angle irons 5, which in turn support the ice tanks 2.

6 represents pans resting on the bottom of the car beneath the ice tanks, for the purpose of catching the drip and water from the melted ice, the same being discharged through the bottom of the car through the usual trap 7.

The ice tanks are held in position by resting at their bottoms on the angle irons 5, being connected at the top, as shown at 8, by plates 9, having the flange 10 extending down on each side of the tops of the tanks, the plates 9 being set into the top of the car as shown at 11. The tanks are held in their position at the end of the car, by means of a series of

cross rods 12, secured at their ends to the side of the car by means of collars 13, secured by lag screws 14. Thus, by removing the lag screws, the cross rods 12 are released and the tanks 2 may be readily removed for the purpose of cleaning, repairing, &c. The tanks 2 are connected near the bottom by suitable tubes 15, whereby the water may be drained from the outside tanks to the central tank.

16 represents an overflow-pipe having perforations 17, through which the water will pass when it has attained the height of said perforations, passing down through said overflow-pipe into the pan 6; and from thence out through the trap 7.

In order to drain the tanks at their bottom, I provide a means for raising the overflow pipe 16, which consists of a lever 18, pivoted to the car at 19, and having an arm 20, pivoted to a collar 21, as shown at 22. Thus, by raising the lever 18, or throwing it into the position shown in dotted lines, Fig. V, the bottom of the pipe is raised above the openings 23 in a collar 24, so as to permit the water from the bottom of the tanks to be discharged out through said openings 23 into the pan.

25 represents plugs situated near the bottom of the tank for the purpose of obtaining access thereto when it is desired to clean the same. The air is caused to circulate through the tanks 2 partially by means of a pipe 26, extending along the side of the car, to a point near the door, where it extends across the car as shown at 27, the portion 27 having a series of perforations 28, through which the warm air passes and is conducted back through the pipes 26 to vertical portions 29 of said pipes. The cold causing a vacuum, the warmer air descends down through said pipes 29 in the interior of said ice tanks, and is cooled passing out at the lower ends of said pipes into the body of the car, a constant circulation being thus kept up. Near the center of the end of the car, I provide an additional pipe 30, having a bell mouth 31, which extends a short distance into the interior of the car from the front wall of the middle ice tank, the bell mouth or funnel shaped pipe thus affording ready access for the warmer air which passes down through the tank in the same manner as the side pipes, and in doing so is cooled

and is discharged into the body of the car near its bottom. The pipes 26 are supported near the top of the car by means of hangers 32.

33 represents blocks between the tanks and the side of the car secured to the body of the car the purpose of which is to support the tanks in such manner as to afford ventilation and circulation of the air between the tanks and the body of the car.

10 I claim as my invention—

In a refrigerator car the combination of the benches formed in a single piece having one foot secured to the bottom of the car outside of the drip pan, and having the other foot  
15 resting on a block at the end of the car, an-

gle irons secured transversely on the benches, tanks for holding a refrigerant supported on the angle irons, rods extending across the car and resting in collars secured by screws to the sides of the car and blocks between the tanks and the sides of the car to support the tanks in such manner as to provide ventilation and circulation of the air between the tanks and the sides of the car; substantially as shown and described and for the purpose  
25 set forth.

JOHN H. DYERSON.

Witnesses:

JAS. E. KNIGHT,

R. L. SILVERMAN.