

No. 692,543.

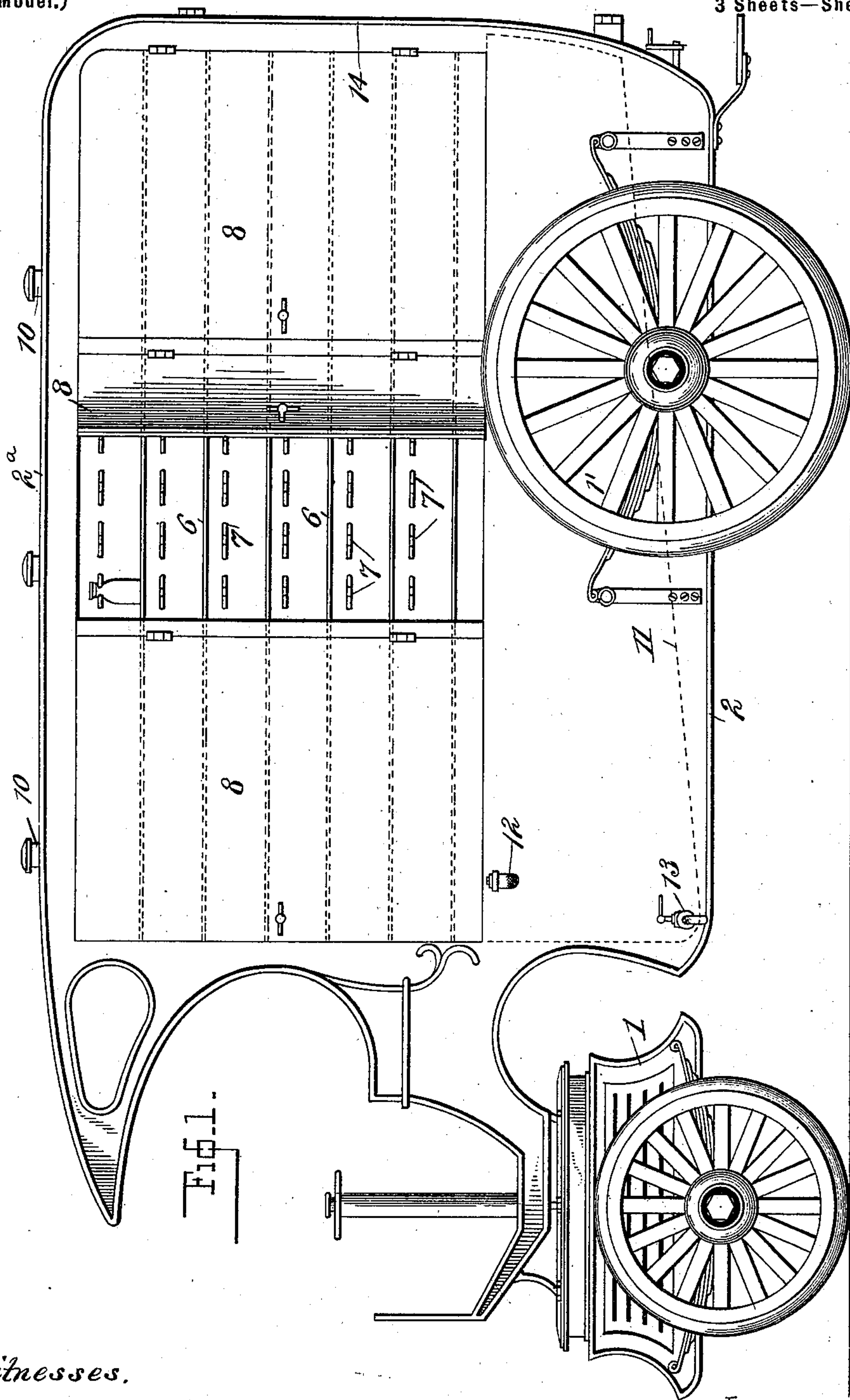
Patented Feb. 4, 1902.

T. H. PRICE.  
DELIVERY WAGON.

(Application filed Sept. 18, 1900.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses.  
H. P. Hammond  
M. A. Scherer

Inventor.  
Theodore H. Price  
by *[Signature]*  
Att'y.

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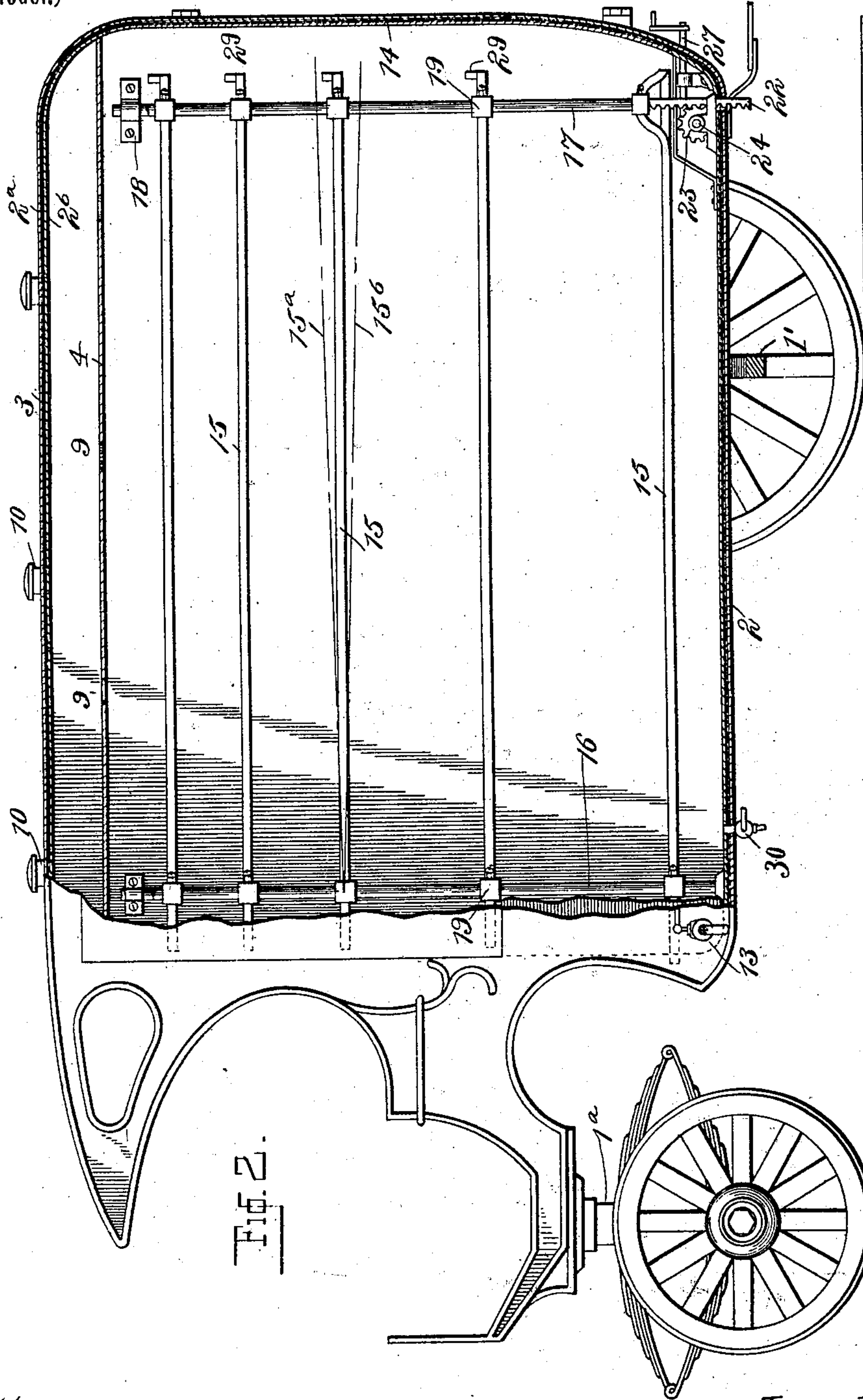


FIG. 2.

Witnesses.  
J. P. Hammond  
M. A. Schenck

Inventor.  
Theodor H. Price  
by *[Signature]*  
Att'y

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Fig. 3

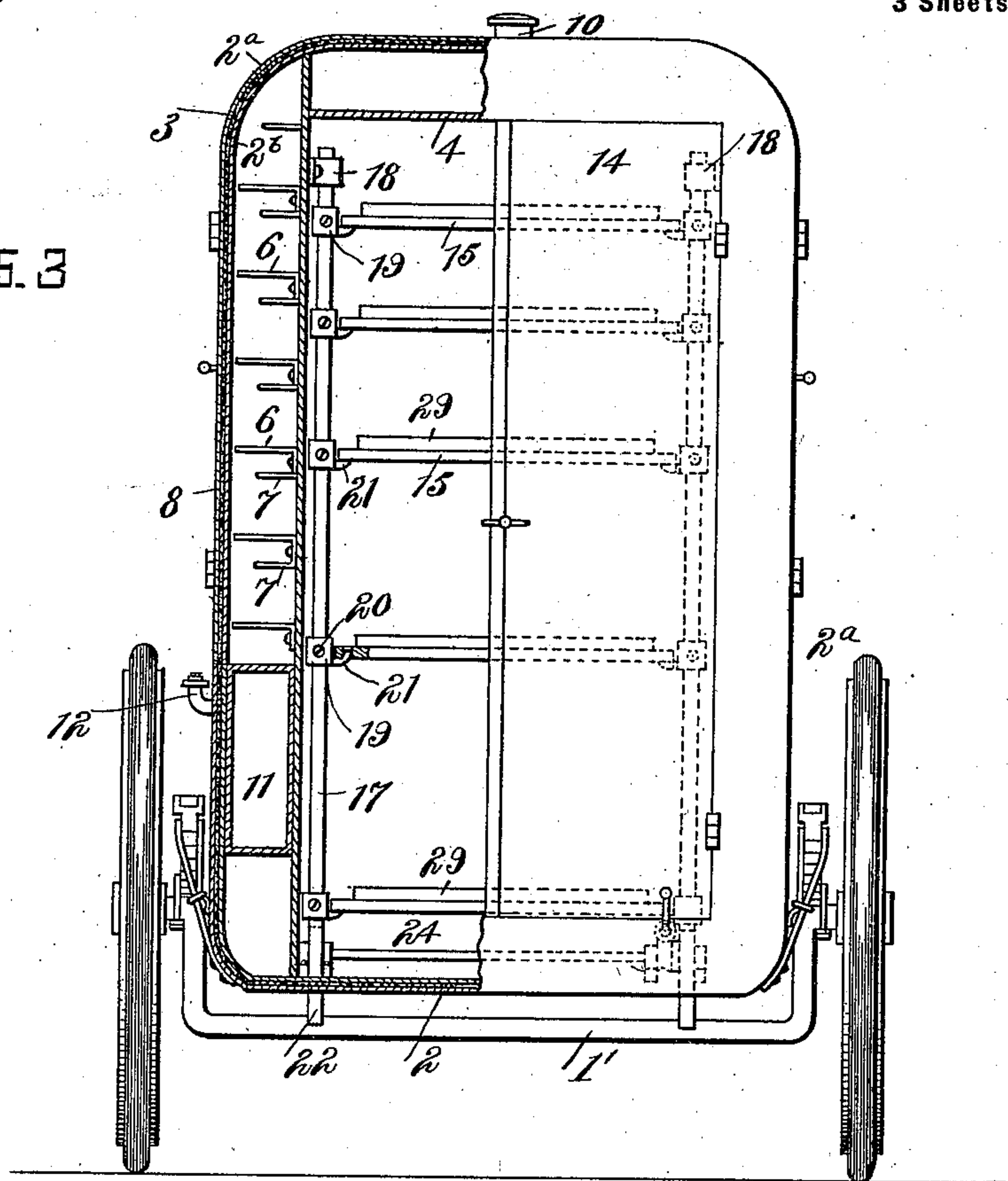
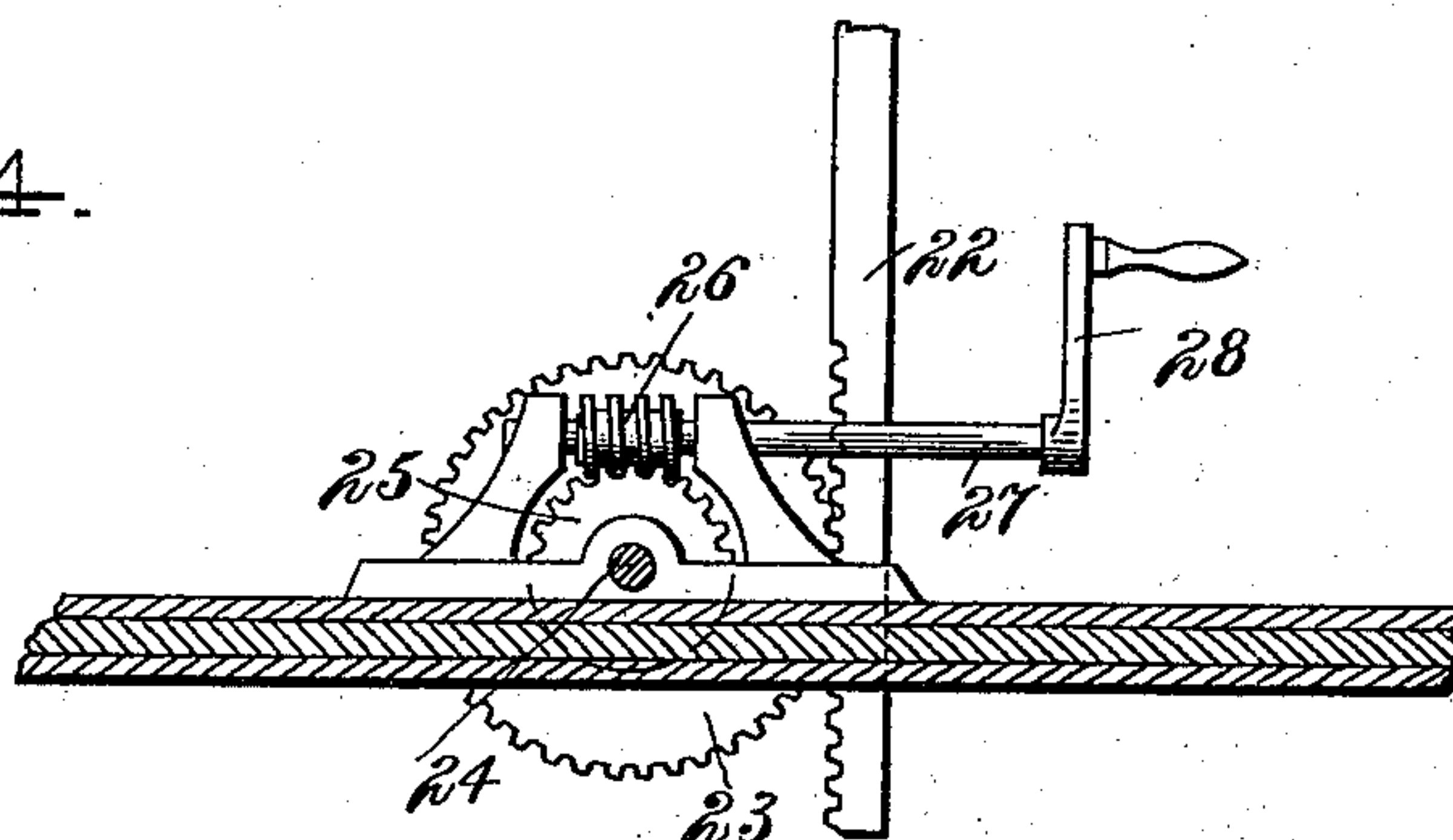


Fig. 4.



Witnesses.  
J. P. Hammond  
M. A. Scher.

Inventor.  
Theodore H. Price  
by *John W. Price*  
Att'y.



# UNITED STATES PATENT OFFICE.

THEODORE H. PRICE, OF NEW YORK, N. Y., ASSIGNOR TO THE CENTURY MILK COMPANY, OF NEW YORK, N. Y., AND JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## DELIVERY-WAGON.

SPECIFICATION forming part of Letters Patent No. 692,543, dated February 4, 1902.

Application filed September 18, 1900. Serial No. 30,383. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE H. PRICE, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Delivery-Wagons, of which the following is a specification.

This invention relates to improvements in delivery-wagons; and its object is to provide a wagon adapted to the delivery of ice and also of perishable material in such manner that the ice serves to cool the perishable material, while the storage-space for the latter serves to protect the ice from the heat of the outside air.

The invention provides means for facilitating the delivery of the ice and other desirable features, as hereinafter set forth.

In the accompanying drawings, Figure 1 is a side elevation of a delivery-wagon embodying my invention. Fig. 2 is a longitudinal section, partly in elevation. Fig. 3 is a transverse section of same. Fig. 4 is a detail view of a lifting-gear for the ice-shelves.

The running-gear of the wagon may be of any usual or desirable form and may be adapted to be drawn by horses or provided with steam, gasoline, electric, or other driving means. In Fig. 1 I have shown a forward truck 1, assumed to be provided with self-contained driving means, the wagon-body being spring-supported from the forward and rear trucks 1 1'.

The wagon-body comprises an outer shell 2, formed so as to exclude heat as much as possible, and consisting, preferably, of a metal framework with outer and inner walls 2<sup>a</sup> 2<sup>b</sup> of pressed or sheet steel with intervening heat-insulating material 3. Suitably supported within this outer shell is an inner shell, box, or compartment 4, whose walls are of sheet-steel or other suitable material. The spaces 5 between the sides of inner shell 4 and the outside of the wagon serve as air-spaces to hinder passage of heat, and according to my invention they are used also as storage and delivery spaces for goods to be delivered of a perishable nature, such as milk, beer, butter, eggs, &c. For this purpose these spaces may be provided with shelves 6, suit-

ably attached to the walls of the inner shell, with clips 7 or other means for engaging or retaining the milk-bottles or other goods, and with doors 8, opening to the outside to permit access to the goods, as required, these doors being of similar heat-insulating construction to the rest of the outer shell of the vehicle.

Air-vents 9 are provided in the top of the inner shell, which, in conjunction with ventilators 10 in the roof of the outer shell, serve to permit sufficient circulation of the air inside the vehicle-body.

In the lower part of the outside spaces between the inner and outer shells are arranged tanks 11, provided with charging nozzles or valves 12 and discharge nozzles or faucets 13, the bottoms of these tanks sloping sufficiently toward the faucet end, so as to give complete drainage or emptying. These tanks may be used to carry milk or other liquid in bulk.

The inner compartment 4, which is closed at the rear by heat-insulating doors 14, is intended to contain ice, preferably arranged systematically in shelves to facilitate quick delivery. To this end I provide a series of shelves 15, supported at the ends remote from the doors 14 by posts 16, and at the ends near the door by posts 17, sliding vertically in guides 18, and held at proper height by a shelf-lifting gear. At both front and back ends the shelves are supported from the posts by brackets 19, adjustably secured on the posts by binding-screws 20 and provided with upturned lugs 21, engaging in corresponding holes in the bottoms of the shelves. This gives a support permitting of some tilting movement and also permits the shelves to be readily removed and to be adjusted to any desired height. Thus the upper shelves may be closer together and the lower ones farther apart, and the ice having been prepared or cut beforehand in certain graded sizes the smaller ones may be placed at the top and the larger ones at the bottom. To facilitate the loading and unloading of the ice, I prefer to provide the shelves with a lifting-gear and to tip the same forwardly for loading or backwardly for unloading. For this purpose I have shown the rear posts 17 as provided with racks 22 en-



gaged by pinions 23 on a shaft 24, extending across the vehicle and having at one end a worm-wheel 25, engaged by a worm 26 on a shaft 27, carrying an operating-handle 28. By turning this handle one way the shelves may be raised to assume the direction indicated by dotted line 15<sup>a</sup>, so that as the ice-blocks are thrown thereon they will slide forward. By turning the handle the other way the shelves may be tipped back to position 15<sup>b</sup>, so as to cause the ice to slide toward the rear, a bead or shoulder 29 being provided at the rear of each shelf to prevent the ice from actually sliding off. The worm and the worm-wheel device lock the shelves in any position to which they may be tipped.

The bottom of the inner shell 4 may be a removable open grating, permitting the drippings from the ice to fall to the bottom of the outer shell, which may be formed as a tank to collect this cold water and utilize it in keeping cool the metal of the outer shell and also the side tanks 11. A cock 30 may be provided for drawing off this collected water from time to time. The whole construction is designed with a view to rapid delivery of the ice and milk and prevention of exposure of either to the heat any more than is absolutely necessary, so as to save undue loss and deterioration.

I am aware that it has been proposed to construct a vehicle with spaces for ice and for goods to be delivered, both of these spaces being surrounded by an air space or spaces for insulation. My invention differs from this in constructing the vehicle with an inner and outer shell, the inner shell adapted to contain ice and to keep the space between the outer and inner shells cool and the said space being utilized for the reception of goods to be delivered and also serving to protect the inner receptacle from the heat of the out-

side air. Each of these compartments, therefore, serves two purposes mutually interdependent. Furthermore, I provide the inner and outer shells with separate doors, as described, so as to give access to the inner shell and to the air-space independently of each other.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a delivery-wagon the combination with the containing body or shell, provided with a door, of shelves arranged within said shell and provided with adjustable supporting means at one end, and operating means for moving said supporting means, whereby the shelves may be inclined toward or from the door, substantially as and for the purpose set forth.

2. In a delivery-wagon the combination with the containing body or shell provided with a door, of shelves arranged within said shell means for supporting one end of the shelves, posts supporting the other end of the shelves, and means for raising and lowering said posts.

3. In a delivery-wagon the combination with the containing body or shell provided with a door, of shelves arranged within said shell, means for supporting one end of the shelves, posts supporting the other end of the shelves, and means for raising and lowering said posts, such means comprising racks on the posts, pinions engaging therewith, a worm-wheel connected to said pinions, a worm engaging said worm-wheel and a handle connected to said worm.

THEODORE H. PRICE.

Witnesses:

A. P. KNIGHT,  
J. GREEN.