(No Model.) 2 Sheets—Sheet 1.

F. M. BARBER.

CAR FOR TRANSPORTING FRUIT.

No. 403,724. Patented May 21 1889.

FIG. I.

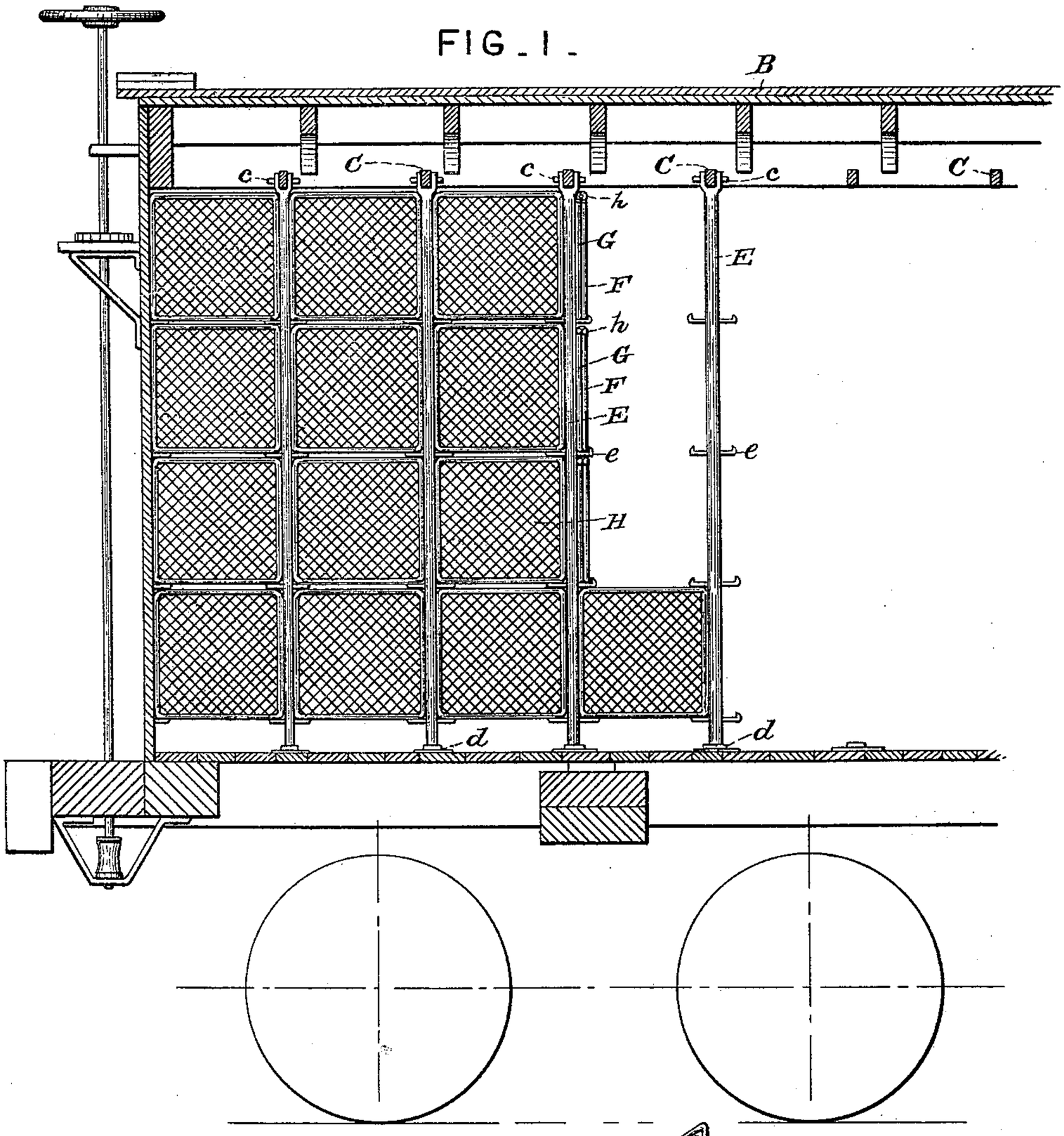
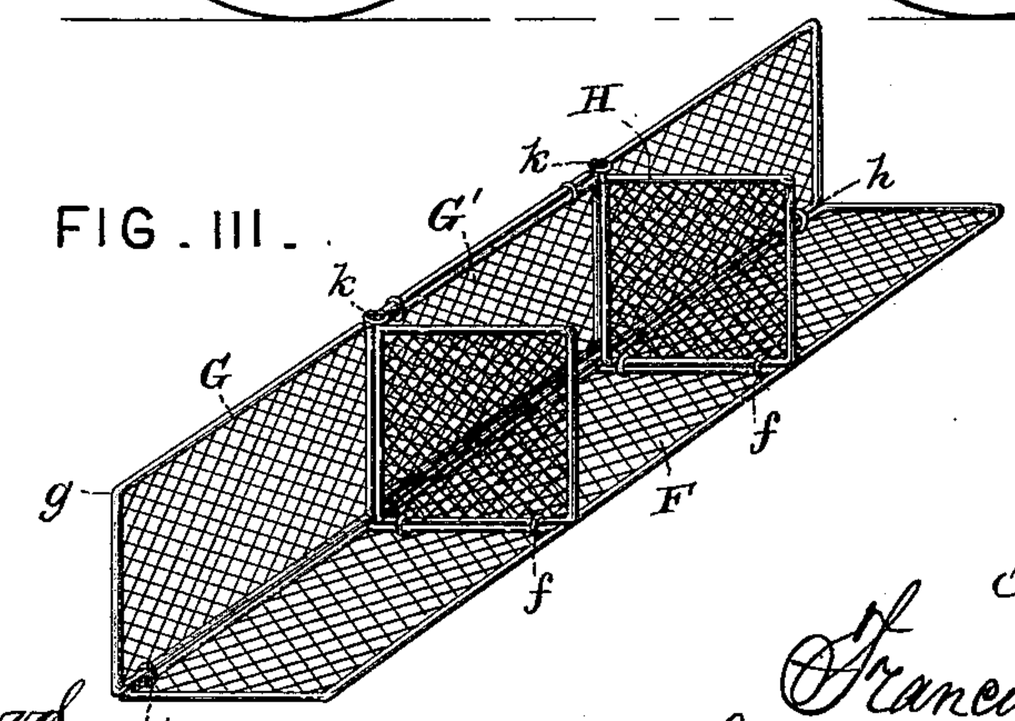


FIG. III.



Attest:

Geo. T. Smallwood.

Philip Hanna

Inventor:

Francis M. Barber

by Poole

his attorney.

(No Model.) 2 Sheets—Sheet 2.

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FIG. II.

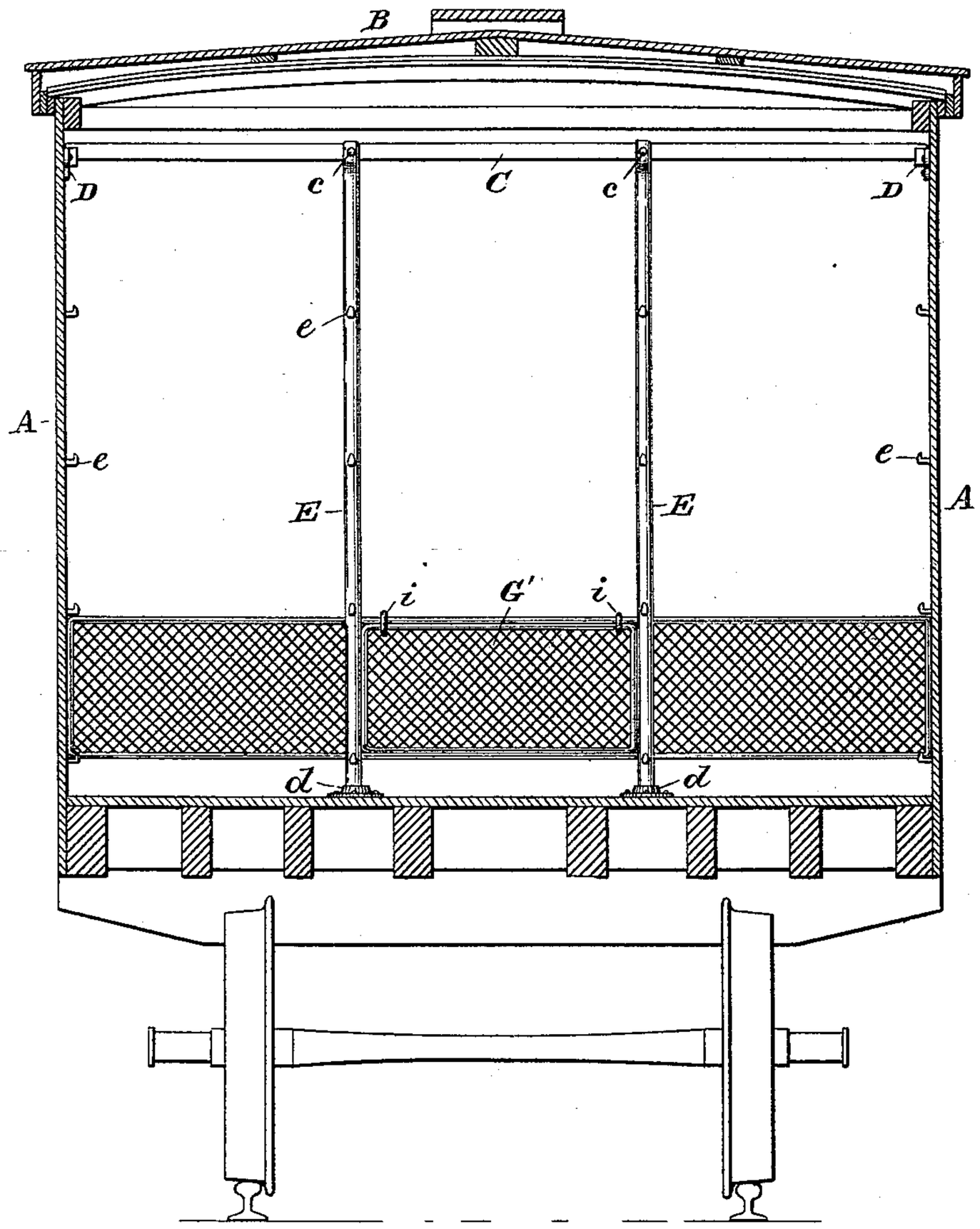

FIG. IV.

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Inventor:
Francis M. Barber
by D. Pollok
his attorney.

UNITED STATES PATENT OFFICE.

FRANCIS M. BARBER, OF WASHINGTON, DISTRICT OF COLUMBIA.

CAR FOR TRANSPORTING FRUIT.

SPECIFICATION forming part of Letters Patent No. 403,724, dated May 21, 1889.

Application filed March 2, 1889. Serial No. 301,768. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. BARBER, of Washington, in the District of Columbia, have invented a new and useful Improvement in Cars for Transporting Fruit, which improvement is fully set forth in the following specification.

This invention has reference to the construction of devices or arrangements in a freight-car for packing and transporting fruit and other articles of a perishable nature; or the same arrangements or devices may be employed in other than land-vehicles and be utilized for other purposes.

In Letters Patent No. 395,648, granted to me January 1, 1889, I have described and claimed a series of ventilated lockers or compartments separated by partitions composed of wire-mesh or similar reticulated material, for use particularly on shipboard for holding clothes, provisions, or other articles. Such series of receptacles or lockers is applicable to many uses; and the object of the present invention is so to improve or modify the construction of the devices shown in said patent as to adapt the same more perfectly to such uses as transporting fruit in bulk in land-vehicles.

As described in my aforesaid patent, each compartment of the series was adapted and designed to be used as a closet having its separate door, and the parts, moreover, were intended to be permanently fastened together.

For the purposes of the present invention it is obviously desirable that the devices be so contrived as to admit of the compartments being filled from the top, and also of their being built up in any number of rows one in front of the other. It is also desirable that the elements composing the ventilated storing-receptacles should be readily put up and taken down, and should be capable of folding up, so as to be packed away in small compass for return to the place of loading.

The present practice of shipping fruit and like perishable objects of small size is either to pack them in perforated or open-work crates or boxes in special cars or to pack them in bulk in ordinary cars. The former method is objected to because the expense attending it is not warranted by the advantages gained, on which account much of the transportation is now being effected by shipping in bulk. There is, however, a limit to which articles—such as oranges—can be piled up one upon another. Consequently it is impossible to carry anything like a full car-load by this method. Moreover, it is an undoubted fact that the thorough ventilation of the fruit in transit is a most important factor in preserving it in good condition.

By the present invention the fruit or other articles can be expeditiously packed in the cars for receiving them, are well protected, and thoroughly ventilated. The perforated partitions by which the cars are subdivided can be folded up into a compact form and the use of cars of special construction is avoided, the invention being applicable to freight-cars of any ordinary construction.

In the accompanying drawings, which form a part of this invention, Figure I is a partial view in side elevation of a freight-car having the invention applied thereto, the side or wall of the car being removed. Fig. II is a vertical cross-section of a car. Fig. III shows in perspective one of the elements of which the structure is composed, and Fig. IV shows in detail one of the notched brackets.

A represents the side walls, and B the roof, of a freight-car of any ordinary construction.

C represents a series of horizontal bars, which are set in notched brackets D, (shown in detail in Fig. IV,) permanently fastened to the sides of the car. Any other suitable mode of removably supporting the horizontal bars C may be adopted, and in some cases the latter may be dispensed with altogether.

E represents a series of uprights, which are attached at their upper ends to bars C by pins *c*, or in any other convenient way, and at their lower ends supported in shoes or steps *d*, so that said uprights can be quickly taken down and set up. Uprights E are provided on both sides with a series of projections or hooks, *e*, for the support of partitions, by which the car is to be subdivided.

One of the elements of which the compartments are built up is shown in Fig. III. It is composed of a horizontal panel, F, a vertical panel, G, and partitions H, all made of reticulated material, such as wire-mesh.

Partitions H are hinged or connected with the horizontal panel F by hooks or staples *f*, so that they can be folded down flat upon the same. The panels are composed of rectangular iron frames *g*, upon which the wire mesh is stretched, and said panels are hinged together by staples *h*, so that the entire element can be folded together and occupy but little space. There are many simple and convenient ways of fastening the several parts together, any of which may be adopted. The intermediate part or division of panel G, which would constitute the front of the middle compartment, is provided with a door, G′, hinged at *i*, so that its lower end can swing outward. Each compartment can have one side movable independently of the others; but it is sufficient to have the middle one of each row so constructed. Any clamp or fastening device of a simple character may be used to hold the parts of panel G and the partitions H in their proper positions. As shown, the frames of these parts have at the corners where they come together small pins or studs, over which is slipped a ring or sleeve, *k*. The elements are preferably made, as shown in the drawings, of such length as to extend from side to side of the car.

The method of loading a car provided with this invention is as follows: The first tier of elements, folded flat, is placed on ledges *l* and leans against the end of the car. The cross-piece C and uprights D nearest the end of the car are set up. One of the elements is then let down and opened, so that its bottom panel, F, rests at its front edge on the lowest row of hooks *e* on uprights E, and at the rear edge on the projection or ledges *l*, attached to the end of the car, as shown in Fig. I. The vertical panel G thus forms the front and the horizontal panel F the bottom of the first series of compartments, which are separated from each other by the partition H. The entire series is closed at all sides except the top, and can easily be filled with the articles to be carried. The next element is then let down above the first, its bottom forming the top of the first series of compartments, and so on until the first vertical tier is built up. Another set of elements and of uprights is then put in place, and the loading proceeds as before until the entire space is filled, or so much thereof as may be desired, leaving room for entrance of hands to unload. Fig. I shows the last elements that have been put in place in the position they occupy before they are let down and opened.

In unloading the operation proceeds in reverse order, as will be readily understood. The necessity of unloading from the top of the compartments is avoided by having the front G′ of the middle compartment of each series independently hinged. As shown, the middle division, G′, of each panel can be swung out from the bottom between the uprights E. When G′ is thus opened down, the contents of the middle compartment are accessible for removal, and when it is empty the partitions H can be folded down and the articles therein will fall in part into the middle compartment and can be readily removed. When the unloading is complete, the several elements are folded up and stowed away, occupying but little space, and the car on its return-trip may be used for the transportation of ordinary freight.

I have shown and described herein the best mode in which I have contemplated applying the principle of my invention; but it will readily be understood that modifications may be made in the plan described without departing from the spirit of my invention.

The collapsible elements may be differently formed and jointed together and differently supported, these being matters of convenience and susceptible of infinite variation without affecting the essential object, which is to produce a series of ventilated compartments separated by partitions of reticulated material easily built up as the loading progresses and quickly taken apart and stowed away.

The compartments may be of any convenient size and shape, and the wire-net or other reticulated material used may have a mesh of any suitable size.

I claim as my invention and desire to secure by Letters Patent—

1. As a means for transporting and packing fruit and for other purposes, a series of compartments separated from each other by partitions of reticulated material and built up of collapsible elements, substantially as described.

2. A vehicle for transporting fruit and for similar purposes, having its carrying-space subdivided by partitions of reticulated material, said partitions being removably supported in said vehicle, substantially as described.

3. A series of open-work compartments built up of elements composed of panels of reticulated material hinged together, substantially as described.

4. In a freight-car or other vehicle, the combination, with the elements or partitions adapted to form a series of ventilated compartments, of the supports comprising removable uprights and constituting a skeleton or frame-work by which the elements or partitions are removably supported, substantially as described.

5. The combination, with supports, of elements forming a series of ventilated compartments, said elements being composed each of a vertical and a horizontal panel and partitions, said parts being all made of reticulated material and hinged together, substantially as described.

6. In a car or other vehicle, the combination, with removable supports, of removable and collapsible elements composed of reticulated material, and forming when in place a series of storage-compartments separated from each other by perforated partitions, so that

the entire series is ventilated, substantially as described.

7. The combination, with supports, of elements composed of panels of reticulated material, said panels having a portion or portions hinged independently of the others, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANCIS M. BARBER.

Witnesses:

PHILIP MAURO,

J. M. WILSON.