

(No Model.)

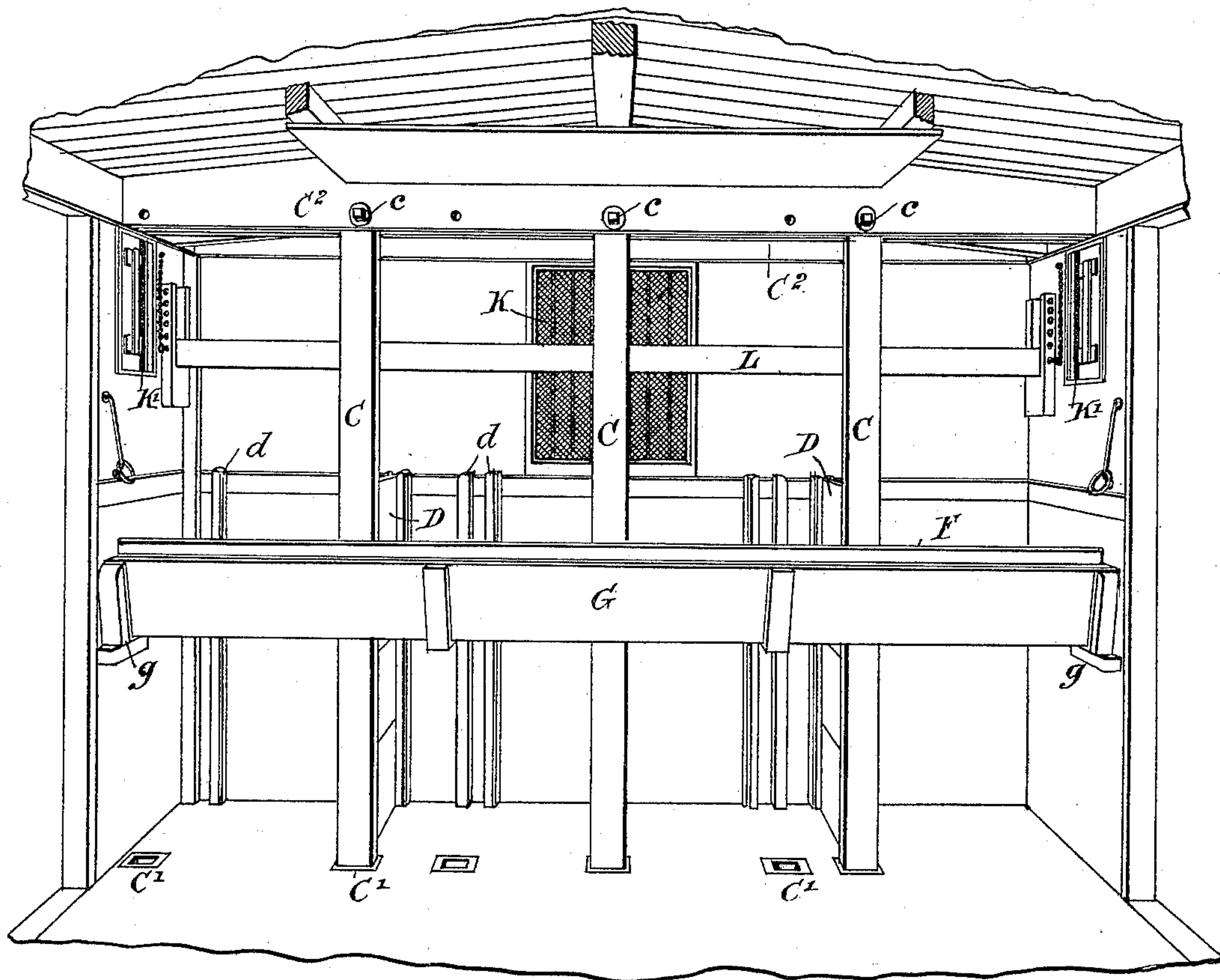
2 Sheets—Sheet 1.

J. H. KIMBALL.
RAILWAY STOCK CAR.

No. 411,340.

Patented Sept. 17, 1889.

— Fig. 1 —



Witnesses

Oliver M. Evans
Wm. D. Heath

Inventor

J. H. Kimball

By his Attorney

Cyrus A. Kellum

(No Model.)

2 Sheets—Sheet 2.

J. H. KIMBALL.
RAILWAY STOCK CAR.

No. 411,340.

Patented Sept. 17, 1889.

Fig. 2

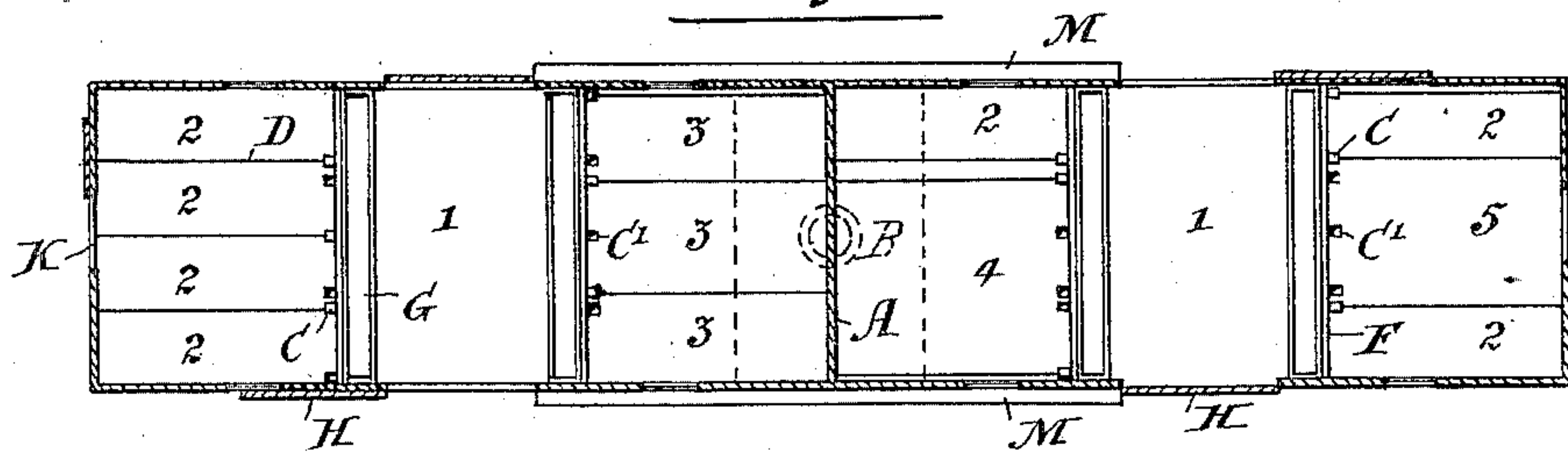


Fig. 3

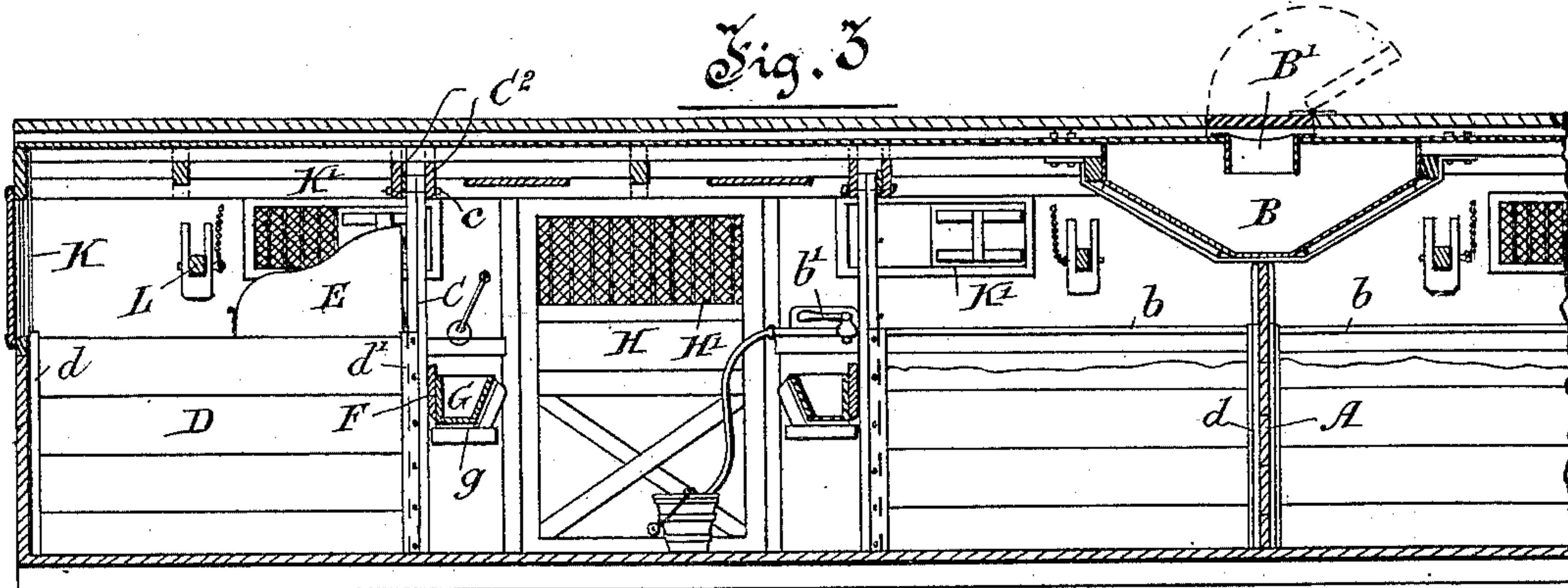
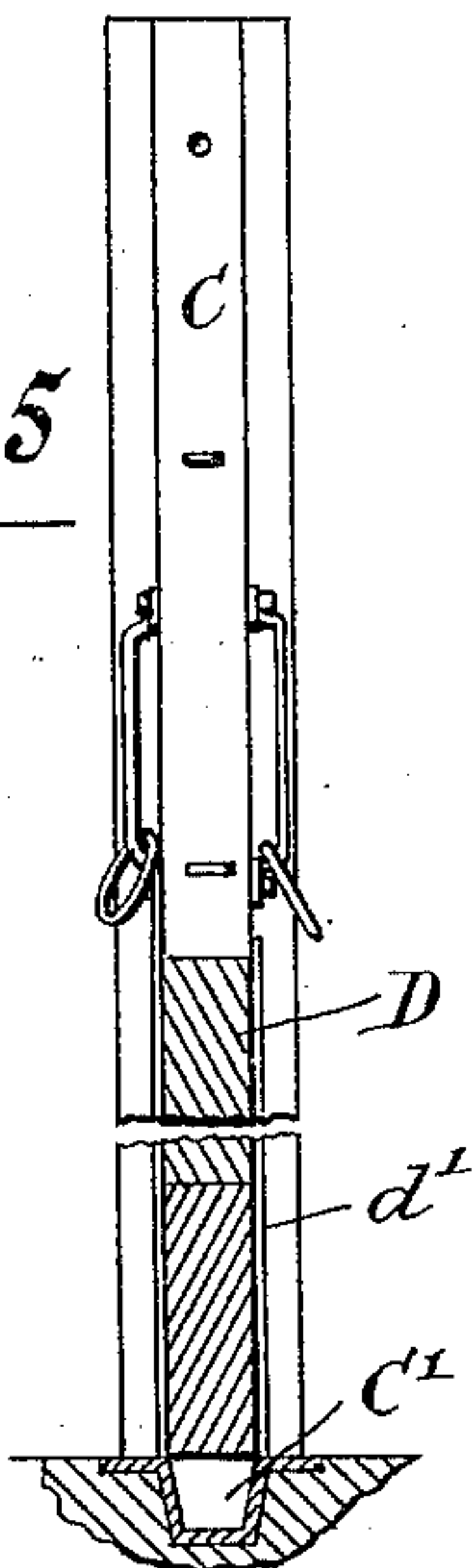


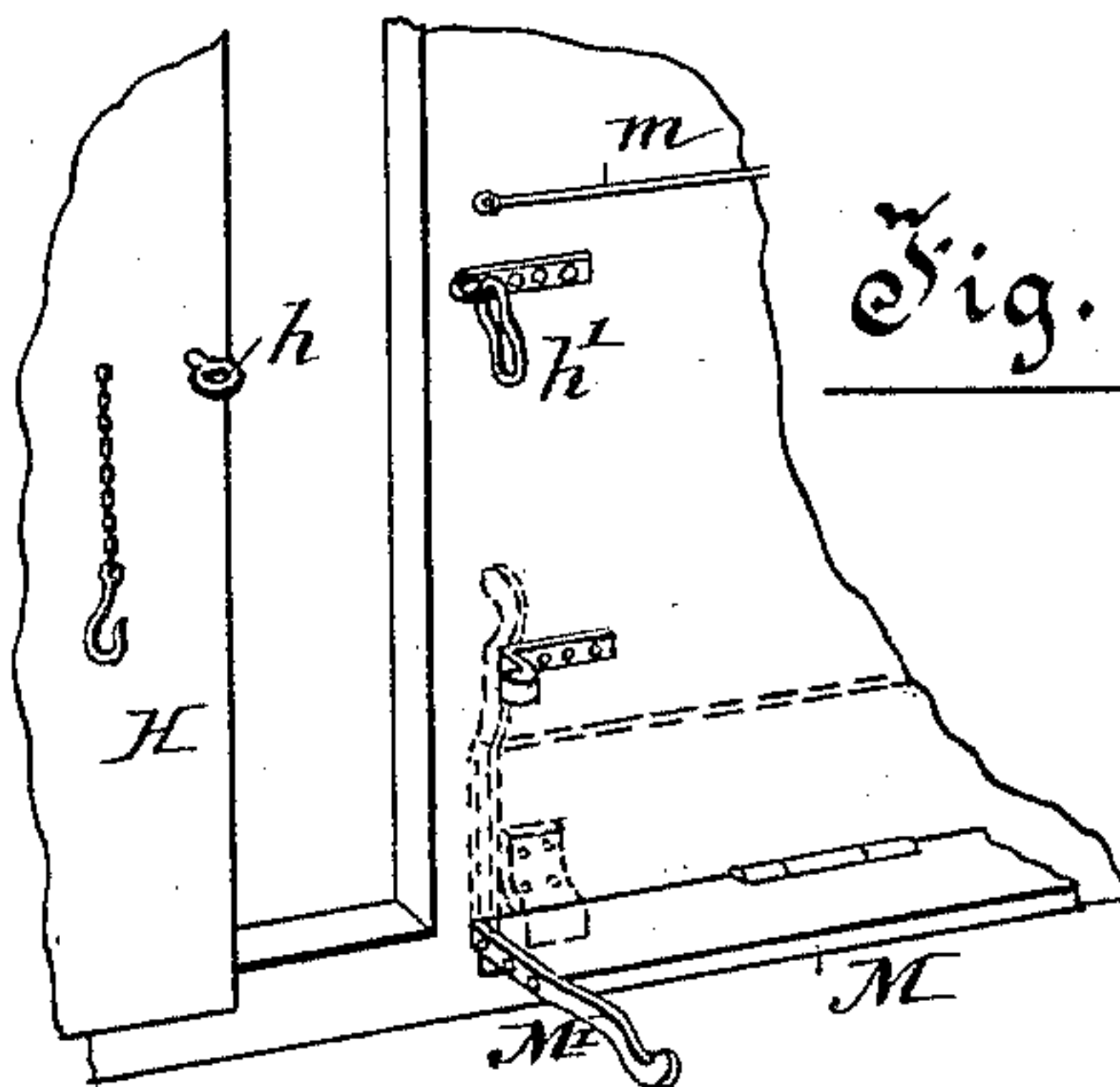
Fig. 5



Witnesses
O. W. M. T. W. and
O. W. M. T. W. and



Fig. 4



Inventor

J. H. Kimball

By his Attorneys

Reginald & Kelton

UNITED STATES PATENT OFFICE.

JOHN H. KIMBALL, OF MONTREAL, QUEBEC, CANADA.

RAILWAY STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 411,340, dated September 17, 1889.

Application filed July 20, 1888. Serial No. 280,560½. (No model.)

To all whom it may concern:

Be it known that I, JOHN HORATIO KIMBALL, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have invented certain new and useful Improvements in Railway Stock-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention has reference to cars used for the transportation of horses by rail; and my object is primarily to so construct and arrange the fittings that each horse can be attended to individually and put in and taken out of his stall without interfering with or disturbing the others; that the horses are so placed as to be best able to accommodate themselves to the movement of the car; that the conditions of the horses' stables are as far as possible reproduced in the car, and that the fittings can be so adjusted as to give room for two, three, or four horses in each row of stalls, and can be stowed away in the car so as to afford an open floor-space upon which freight—such as flour in barrels—can be stored.

The car may be thus briefly described: It is framed as a box-car, with a central transverse partition dividing the car into two compartments, each provided with side openings closed by doors sliding toward the ends of the car. The internal fittings, which can all be removed to give a clear floor-space for freight, are as follows, and, as both compartments are alike, only one need be described: At a suitable distance from the ends of each compartment I propose to set in sockets and secure to cross-beams at the top of the car posts, which form the stall-posts, leaving in the compartment a central space or alley with openings on each side for ingress and egress, in which the feed can be kept and the attendant do his work. The sockets into which the posts are stepped are so arranged in the floor that either three or four stalls may be formed at each end, or one (almost a loose box) for a mare and foal, or one large stall and two ordinary ones. The stall-partitions are secured in any suitable way to these posts and to the ends of the compartment, and to the posts are hinged or otherwise attached and locked in place curved pieces, which will give the divisions the shape of

ordinary stable-stalls. Across the front of each row of stalls is placed a breast-board, against which the horses can lean, and in one with this is made a feed-trough, both being carried in pockets at the side of the cars. In the center of the car and over the division between the compartments is placed a tank, which can be filled from any tank on a railway, and from which water-pipes provided with proper cocks are taken to the alleys in both compartments. For ventilation I provide an opening at each end of the car in addition to two openings on each side near the ends of the stalls, all these being filled in with wire-gauze, as well as a large opening in the door. I further provide on both sides of the car and running between the doorways of the compartments a foot-board, which can be let down to allow of the passage of the attendant of one compartment into the other, a hand-rail being fixed to the side of the car to assist him in passing. The door-fastenings are so arranged that they cannot project beyond the edge of the door, and there is therefore no chance of the horse coming in contact with them in entering or leaving the car.

For full comprehension of my invention reference must be had to the annexed drawings, forming part of this specification, in which—

Figure 1 is a perspective view of one row of stalls taken from the alley; Fig. 2, a diagram of car, showing alternative arrangement of stalls; Fig. 3, a longitudinal sectional elevation of part of car; Fig. 4, a view of the door-fastening and side foot-board, and Fig. 5 an elevation and plan of the stall-post.

Similar letters of reference indicate like parts.

A is the central transverse partition, dividing the car into two compartments, and B the tank, (shown specially in Fig. 3,) preferably extending the whole width of the car, and having an opening B' provided with a hatch or cover through which it can be filled in the same way that a tender is supplied.

b b are water-pipes leading from the tank on either side of the partition to the central alley l and provided with cocks b'.

C C are posts set into sockets C' C', formed in the floor of the car, their heads being set

between transverse beams $C^2 C^2$ and secured thereto by bolts $c c$, which pass through bolt-holes formed in the transverse beams $C^2 C^2$ at points immediately over the sockets $C' C'$.

5 The posts C are provided with channels or grooves d' . The position of these posts $C C$ can be varied, as shown in diagram, Fig. 2, in which the figures 2 2 2 2 denote stalls accom-
10 modating four horses in a row; 3 3 3, three horses; 4, an extra large stall for mare and foal with an ordinary stall 2, and 5 a large stall with an ordinary stall 2 on either side.

$D D$ are stall-divisions constructed of boards in any usual way slipped into place
15 between uprights $d d$, secured on the ends of the compartment and on the posts. To the posts are hinged pieces $E E$, resembling the head of a stall, resting on and locked to the top board of division, serving to keep the
20 horses from seeing their neighbors in the next stalls.

$F F$ are the breast-boards, to which are attached the feed-troughs $G G$, both these resting immediately in front of the posts in pock-
25 ets $g g$, formed on the sides of the car.

$H H$ are the doors sliding toward the ends of the car and provided, as usual, with fastenings in the shape of eyes h , over which the hasp passes and is locked. I propose, how-
30 ever, instead of hinging part of this hasp, which may project beyond the edge of the door and hurt the horse when passing in or out, to have the fastening a drop-link, as at h' .

Ventilation is effected in each compartment by one large opening K at the end and two $K' K'$ on each side near the stall-posts. In the doors are also formed openings H' , and all these are filled with wire-gauze and pro-
40 vided with shutters.

L is the kicking-bar, placed across the car and suitably carried.

To insure rapid communication between the compartments of the car in case of assist-
45 ance being required by either attendant, I hinge to the sides of the car between the doors foot-boards M , which can be let down by any system of levers M' , as in Fig. 4, thus affording passage-ways. m is a fixed hand-
50 rail for safety.

From the above description and the drawings it will be seen that the horse can be very easily introduced into the central alley 1 and thence backed into his stall and haltered on
55 both sides to rings sliding on vertical rods on the posts, the side pieces $E E$ preventing stallions from being irritated when in place by the sight of each other, and serving to keep them apart. The breast-board gives the
60 horses a rest, against which they can brace themselves, and the feed-trough and water-supply enable the horses to be fed and watered with very great facility. By this arrange-
65 ment any horse can be withdrawn from or put into a stall without interfering with the other horses—an arrangement which will be found

of very great use in case of sickness in transit.

As the whole of the fittings, with the exception of the central transverse partition, are
70 removable and can be stowed away in suitable receptacles formed in the car, it may be used for the transportation of flour or like freight on its return journey.

For small shipments of horses, cars of only
75 the capacity of one of the compartments may be used, and, as before mentioned, be fitted up exactly in the same way, except that the tank will be divided and half placed at each end, the pipes being led, as before, to the central
80 alley.

What I claim is as follows:

1. In the herein-described convertible stock-car, the combination, with the main body thereof, of the stall-posts having their inner
85 faces channeled so as to receive the ends of the stall division-boards, the central partition (adapted to have stalls formed on either side) provided with uprights forming channels, in which the rear ends of the stall-divisions are
90 secured, cross-beams secured to the top and side of the car, within which the ends of the stall-posts pass, the car-floor provided with a series of sockets, into which the lower ends of the stall-posts fit, and of the bolts or pins for
95 securing the stall-posts between the cross-beams, substantially as herein shown and described.

2. In the herein-described railway stock-car, the combination, with the movable stall-
100 posts, said posts fitting at their lower end within the sockets formed in the car-floor, of the transverse beams running the entire width of the car and secured to the top and sides thereof, said transverse beams having an
105 opening or channel formed therebetween into which the upper ends of the stall-posts fit, securing pin or bolt passing through holes in the side of the transverse beams and into the stall-posts at the top thereof for securing said
110 posts in an adjusted position, stall-divisions having their forward ends secured in grooves or channels formed in the rear face of the stall-posts, and the rear ends thereof within the channel formed by the uprights $d d$, and
115 of the breast-board running the entire width of the car, in front of the stalls, and being secured in the pockets $g g$ at either side of the car, substantially as set forth.

3. In the herein-described convertible stock-
120 car, the combination, with the movable horse-stalls, said stalls consisting of the stall-posts adapted to be secured at their lower ends within the sockets formed in the car-floor, and at their upper ends, within or between the
125 transverse cross-beams, secured at the car top and sides, and of the stall-divisions secured at their front to the stall-posts and at their rear within the channel or groove between the uprights $d d$, of the breast-board and feed-
130 trough passing in front of the stalls and running the entire width of the car, pockets se-

cured to the car-sides and into which the ends of the breast-board and feed-trough are secured, and of the transverse kicking-bar passing above the stalls near the rear thereof, and having its ends adjustably secured in the pockets located at the side of the car, substantially as herein shown and described.

4. In the herein-described convertible stock railway-car, the combination, with the main body thereof, of the central transverse partition dividing the car into two compartments, movable horse-stalls located on either side of the central partition and at the ends of the car, cross-beams C^2 , vertical stall-posts C , the upper ends of which fit between the transverse beams C^2 and the lower ends within the socket c' , formed in the car-floor, locking-bolt c , passing through the sides of the transverse beams and ends of the stall-posts, so as to secure the latter in position, stall-divisions D , constructed of boards secured at their forward ends within the channel or groove d' ,

formed in the stall-posts, and at their rear ends between the uprights d d , breast-board and feed-trough passing in front of the horse-stalls, pockets g g at the side of the car into which the ends of the breast-board and feed-trough are secured, transverse adjustable kicking-bar secured above the stalls near the rear thereof, locking-pockets at either side of the car into which the ends of said bar are secured, water-tank secured centrally within the car above the transverse central partition and running the entire width of the car, opening B' in the car-top through which water passes into the water-tank, swinging doors secured to the top of the car for closing said opening, and of the water-distributing pipes b , leading from said tank to any desired portion of the car, substantially as set forth.

J. H. KIMBALL.

Witnesses:

OWEN N. EVANS,
WM. P. MC. FEAT.