

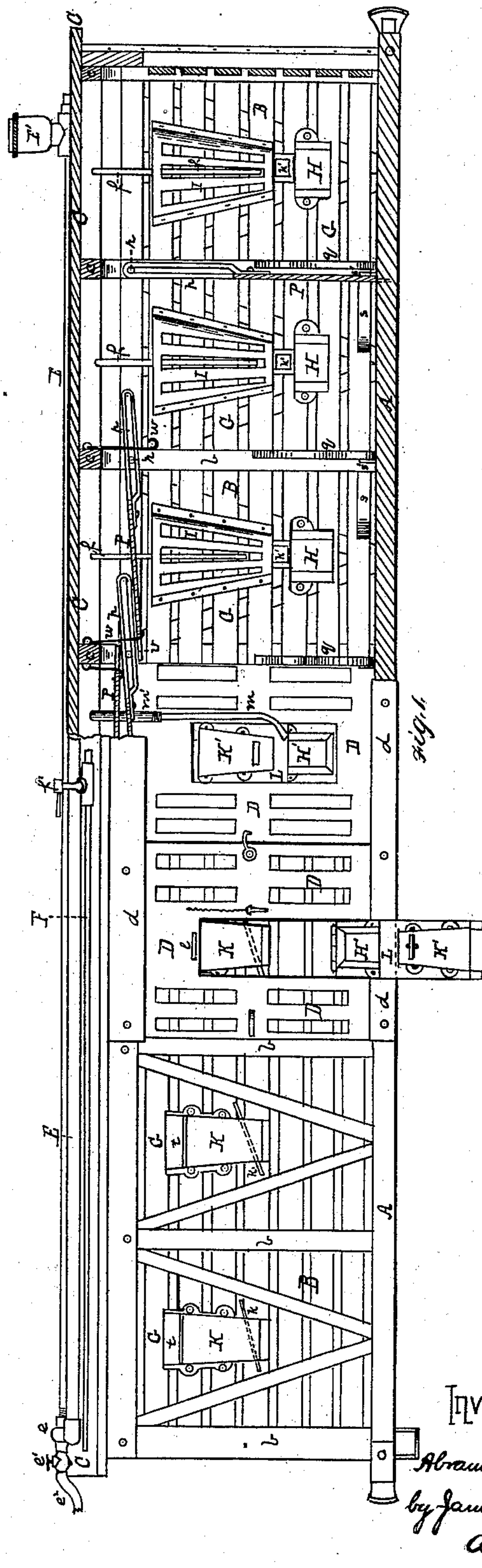
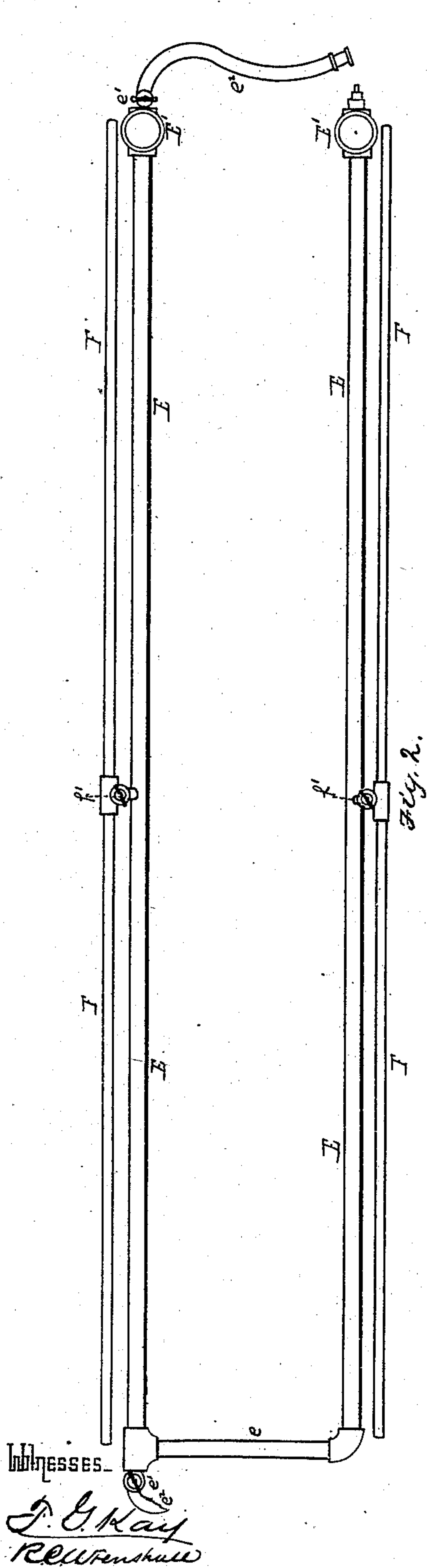
(No Model.)

2 Sheets—Sheet 1.

A. REESE.  
Stock Car.

No. 239,341.

Patented March 29, 1881.



(No Model.)

2 Sheets—Sheet 2.

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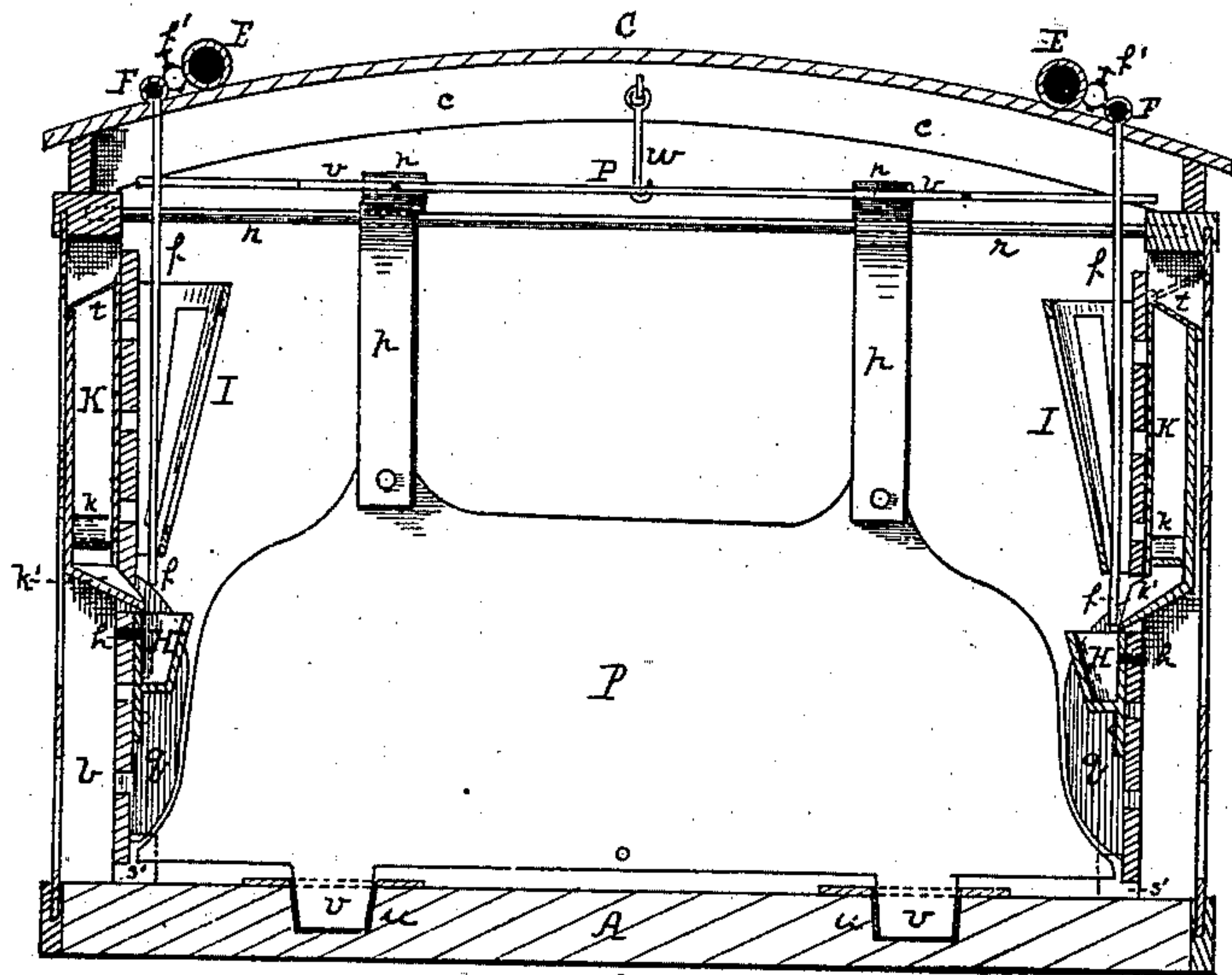


Fig. 3

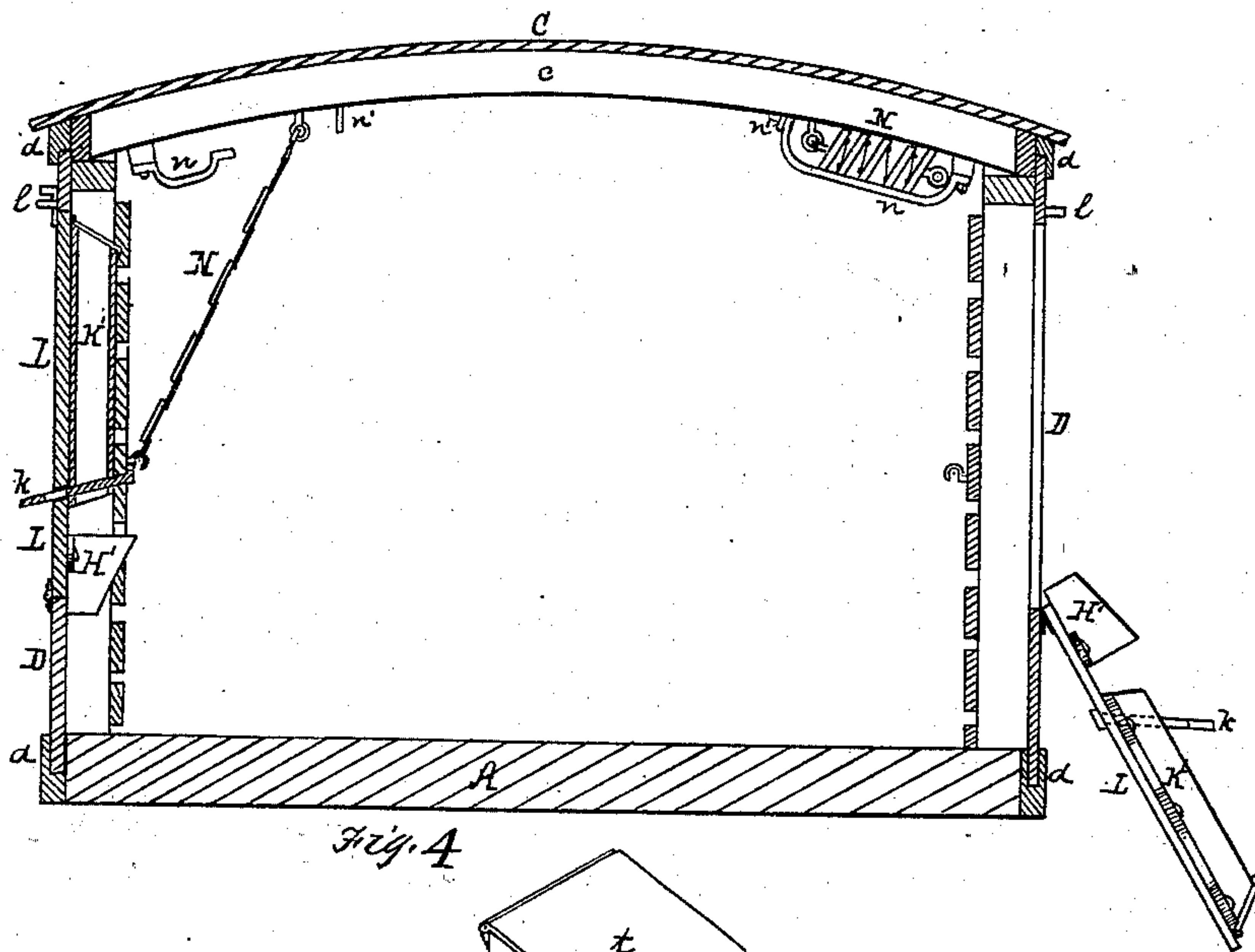


Fig. 4

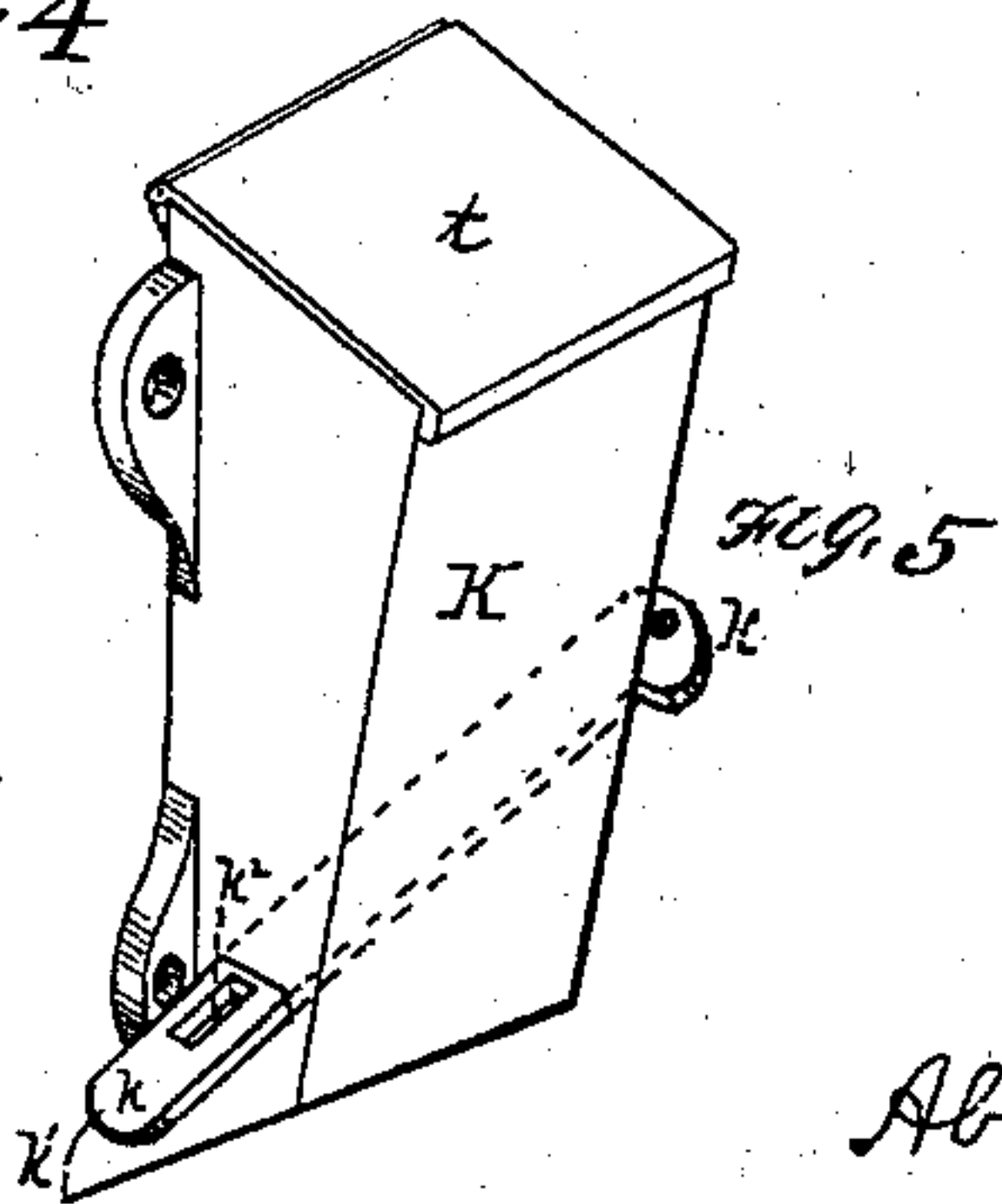


Fig. 5

Witnesses.

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# UNITED STATES PATENT OFFICE.

ABRAM REESE, OF PITTSBURG, PENNSYLVANIA.

## STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 239,341, dated March 29, 1881.

Application filed December 17, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAM REESE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Stock-Cars; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

10. Figure 1 is a side view, partly in section, of my improved stock-car. Fig. 2 is a plan view of the tubular tank and connections. Fig. 3 is a cross-section through one of the ordinary stalls. Fig. 4 is a cross-section through the central stall, illustrating my improved door and connections; and Fig. 5 is a detached perspective view of one of the feed-bins.

Like letters of reference indicate like parts in each.

20 My invention relates to the construction of the railroad-cars used for the transportation of horses, cattle, and other live stock from place to place by rail. The cars heretofore in general use for this purpose have been found exceedingly objectionable for the reason that, as no means were provided for feeding and watering the stock, they had to be removed from the car at stated times for this purpose. To overcome this difficulty different constructions of stock-cars have been devised, in which several means were provided for feeding and watering the stock in the car and separating them from each other to prevent accident.

35 The object of my invention is to provide certain improved means for rapidly and easily feeding and watering the stock during transportation, and, if desired, separating the stock by partitions to prevent their injuring each other, and also to arrange the car for the transportation of freight.

40 My invention consists in certain improvements, first, in the water-delivering apparatus; second, in the feed-delivering apparatus; third, in the construction and arrangement of the movable partitions; and, fourth, in the arrangement of the feeding apparatus on the car-door.

50 To enable others skilled in the art to make and use my invention, I will describe its construction and manner of use.

In the drawings my invention is illustrated in connection with a stock-car of the usual construction, there being the floor A, sides B,

formed of the posts *b* and horizontal slats supported thereon, and the roof C, supported by the girders *c*. The doors D are arranged to slide along one side of the car in guides *d*, in the usual manner, and are provided with feeding apparatus, as hereinafter described.

Extending along the car-roof is the tubular tank E, which is formed of two lengths of galvanized metal tubing, about six inches in diameter, secured on either side of the roof, connected at one or both ends by a like tube, *e*. At the ends of the tubular tank E are formed the funnels E' for receiving the water, a funnel being arranged on each side of the car, so that the tank can be filled on either side thereof. The funnels are closed by suitable caps on hinges, or screwed to place, as desired, vent-holes being formed in the caps to allow the ingress of air when water is drawn off. At both ends of the car suitable stop-cocks, *e'*, are attached to the tubular tank E, and the stop-cocks of adjoining cars may be connected by hose *e''*, and the tanks of an entire train filled by one connection at the water-station, or by water forced from the engine-tank during transportation, the water passing through the hose-connections to the several tanks on the cars. The tanks can also be emptied, when desired, by means of these stop-cocks *e'*. The tanks are adapted to hold about three barrels of water, which is a sufficient supply between the water-stations.

Running parallel with the tubular tank on both sides of the car are the water-conductors F, for carrying the water to the different feed and water basins of the car, as hereinafter described. Each conductor F is connected to the tank about midway of the car by a valve, *f'*, by means of which the flow of water from the tubular tank is controlled. Leading from the conductors F on either side of the car are the water-pipes *f*, which are adapted to deliver the water into the several basins on each side of the car.

The car is arranged for the accommodation of fourteen cattle or stock, there being seven compartments or stalls, G, and two feed and water basins, H, attached to the opposite sides of the car in each stall, it being intended to secure two in each stall with their heads in opposite directions, ample room being provided for standing or lying when they are so secured. In the back of each basin H is formed an over-



flow, *h*, which conducts the surplus water to the outside of the car and prevents its falling over onto the car-floor. The feeding arrangements in all but the central stall are the same, there  
 5 being a hay-bin, *I*, at each end above the basin *H*, through which bins the water-pipes *f* pass, their discharge being just above the basins.

Arranged on the outside of the car, opposite and just above each basin *H*, are the feed-bins  
 10 *K*. These bins are preferably formed of light galvanized iron, and their outer faces are about flush with the posts *b* of the car, thus occupying a place between the posts available for no other purpose, and being protected from acci-  
 15 dent by the car-posts. A spout, *k'*, leads from each bin into the basin below it, and in the bottom of the bin, above the spout, is the inclined sliding valve *k*, by means of which the passage of the feed from the bins is controlled.  
 20 This valve is provided near its lower end with the slot or opening *k*<sup>2</sup>, which, when the valve is pushed up, permits the passage of the feed from the bin through the spout into the basin. These valves can either be operated separately by  
 25 hand at the side of the car, or the several valves on each side can be connected by rods and operated simultaneously at the top or end of the car, so that the feeding can be accomplished when the car is in motion. As the slide-valve  
 30 is mounted in an inclined position, it naturally slides to the bottom of the incline, and when in that position is closed, and any jarring of the car in transportation only closes it the tighter. The tops of the bins are provided with hinged  
 35 covers *t*, to protect the feed from rain.

One great difficulty heretofore encountered has been to arrange the feeding attachments for the central stall opposite the doors, as, if they were attached inside the door, it could not  
 40 be slid aside to admit entrance to the car, and if placed on the outside of the car they would extend out too far and be broken off by passing trains.

I have arranged my feeding attachments on a plate or frame, *L*, which is hinged to the door  
 45 at its base, and when closed fits into an opening of proper size in the door, being secured in place by a suitable catch, *l*. The basin *H'* and feed-bin *K'* are secured to the inner side of this  
 50 plate, the slide-valve of the bin extending through it, and when it is secured in place they extend into the interior of the car in proper position for feeding the stock in the central stall. When, however, the door is to be opened  
 55 the catch *l* is removed, and the plate *L*, swinging on its hinges, is lowered down until no part of it will come in contact with the car in sliding the door. The water-pipes *m* for the basins on the doors are provided with flexible  
 60 joints *m'*, by means of which the water can be directed into the basin when the door is closed, but which can be swung out of the way and hung up when the car is opened.

To provide hay-racks for the central stall I form a folding rack, *N*, of a series of bars  
 65 loosely connected by links, and attach one side of the rack to the car-roof, and connect the

other side, by hooks or other suitable devices, to the posts on either side of the car-door. One of these racks is connected at each side of the  
 70 car, and when so arranged they form suitable hay-racks. When, however, the car is to be opened the rack opposite the door is unhooked from the posts, folded up, and secured at the  
 75 top of the car, above the partitions, and entirely out of the way, by means of the swinging arm *n*, which is brought under the rack and caught in the hook *n'* in the car-roof.

The car is divided into compartments or stalls by means of the movable partitions *P*,  
 80 which are arranged at suitable intervals in the car, the partitions being preferably formed of heavy sheet-iron. Above each partition, extending across the car, is a stationary rod, *r*, and the partitions are hung on these rods by  
 85 means of two long slotted bars, *p*, formed of half-oval iron rods bent over at the top, the ends being riveted to the top of the partitions. In the floor of the car, below each partition, are formed two slots, *u*, into which two lugs,  
 90 *v*, on the base of the partition fit, the partitions being thus held in place by the slotted bars and lugs. If desired, the lugs may extend through the car-floor and be locked by a pin under the car. The partitions are guided  
 95 to place by means of the inclines *s* and stops *s'* on the sides of the car, the ends of the partition sliding along the inclines *s* until they come against the stops *s'*, when the lugs *v* will be brought directly over the slots *u* and will  
 100 drop into place. The partitions, with their slotted bars, are about one-third longer than the width of the stalls, so that they cannot be swung directly up to place at the top of the  
 105 car to remove the stock or arrange the car for freight. This is accomplished by lifting up the partition, so that the slotted bars *p* travel up on the rod *r* until the space occupied by the partition is less than the width of the stall, when it can be easily swung to the top of the  
 110 car and secured there by the hooks *w*. As the hay-racks *I* extend out a short distance into the car, the sides of the swinging partitions *P* are necessarily cut away so that they will swing  
 115 past the racks, and a space is thus formed between the partitions and car-sides in which the foot of an animal might be caught. This space is closed by means of the side wings, *q*, attached to the car-sides, and extending out  
 120 so as to fill the space so formed.

My improved stock-car is used in the following manner: Before the stock are put into the car the hay-racks *I* and feed-bins *K* are filled with hay and feed, respectively, they being large enough to hold the usual allowance  
 125 for a three days' trip. The water-tank *E* may also be filled with water directly from the tank-house, or through the hose-connections above described. As the water-tank is tubular and extends on both sides of the car, its  
 130 weight is evenly distributed thereon, and will not have the tendency to bear down one side or end, as where a common circular tank is used. The partitions *P* having been previ-



ously hung up, the stock are led into the car and two horses or steers put into the end stall, the head of one being secured to each basin H, and as they are secured at opposite sides of the car, they counterbalance each other. The end partition is then unhooked and lowered, the slotted bars *p* sliding on the cross-rod *r*, and the partition being guided along the inclines *s* until it comes against the stops *s'*, when the lugs *v* are brought just above the slots *u*, and can be dropped into them, thus securing the partition in place. The side wings, *q*, fit into and fill up the parts cut away in the partition, and thus form a continuous partition across the car. Two more are now led in and secured, as above described, and the partition lowered and secured, the car being thus filled on both sides until only the central stall, opposite the doors, is empty. The car-door, which is closed, is then arranged with the swinging plate carrying the feed-bin and basin secured in place, the water-tube secured so as to direct the water into the basin, and the folding hay-rack N lowered, secured to the car-posts on either side of the door, and filled, when the two of this stall can be led in and one secured to that basin. The door D may then be closed, the hay-rack N lowered, secured, and filled, the water-pipe secured in proper position, and the plate L, carrying the feed-bin and basin, swung to place and remaining steer secured thereto, when the car is ready for transportation.

During transportation the stock can be watered when the car is in motion by simply opening the valves *f'* on each side of the tubular tank E, when the water will pass through the conductors F, down the water-pipes *f* and *m*, into the basins, the valves being closed when the basins are filled, and any surplus passing off through the overflows *h*. The tank can be refilled, as above described, and in winter the cattle can be watered by simply admitting enough water to the tubular tank to fill the basins, the tank being kept empty to prevent freezing. The stock can also be fed by pushing up the inclined slide-valves *k* in the bottom of the bins K, when the feed will pass down the troughs *k'* into the basins H. Where the valves are connected as above described this can also be accomplished while the car is in motion. As the valves are on the outside of the car and are set on an incline, they cannot be opened by the stock, and any motion or jarring of the car will only serve to keep the valves tight to place.

The cattle are removed from the car in the following manner: The swinging plate L on one of the car-doors is lowered, the water-pipe *m* disengaged, and the door slid to one side, as shown in Fig. 1. The folding rack N is then unhooked and secured by the arm *n* at the top of the car, the pipe *m* being also hung up out of the way. The stock in that stall are then led out, the feeding arrangements on the opposite door hung up. The central partitions, P,

are then swung up and secured by hooks, when the stock in the next stalls can be led out, and so on until the car is emptied.

If desired, the car may be used without partitions, in which case my improvements will be found well adapted for feeding and watering during transportation; but for fine stock, stalls for the accommodation of either one or two are considered necessary.

When the car is used for freight the partitions and other movable apparatus are secured at the top of the car, giving a free space for storage of any class of goods.

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

1. In cars for transporting stock, the combination of the tubular tank E, water-conductors F, extending longitudinally along the car-roof, valves *f'* between the tank and conductors, and water-pipes *f*, substantially as and for the purposes set forth.

2. In cars for transporting stock, the feed-bins K, provided with the inclined sliding valve *k*, substantially as and for the purposes set forth.

3. In cars for transporting stock, the sliding doors D, in combination with the hinged plate or frame L, carrying the feed-bin and basin, substantially as and for the purposes set forth.

4. The combination of the sliding door D, hinged plate or frame L, carrying the feed-bin and basin, and the water-pipe *m*, having a flexible joint, substantially as and for the purposes set forth.

5. In cars for transporting stock, the folding hay-rack N, attached to the car-roof and adapted to be secured to the car-posts, substantially as and for the purposes set forth.

6. In cars for transporting stock, the folding hay-rack N, in combination with the arm *n*, substantially as and for the purposes set forth.

7. The combination of the partition P, provided with the slotted bars *p*, and the stationary cross-rod *r*, substantially as and for the purposes set forth.

8. The combination of the partition P, provided with the slotted bars *p* and lugs *v*, the cross-rod *r*, and the slots *u* in the car-floor, substantially as and for the purposes set forth.

9. The combination of the swinging partition P, provided with the lugs *v*, the inclines *s*, stops *s'*, and slots *u* in the car-floor, substantially as and for the purposes set forth.

10. The combination of the removable partition P and the side wings, *q*, attached to the car-sides, substantially as and for the purposes set forth.

In testimony whereof I, the said ABRAM REESE, have hereunto set my hand.

ABRAM REESE.

Witnesses:

F. G. KAY,  
JAMES I. KAY.