

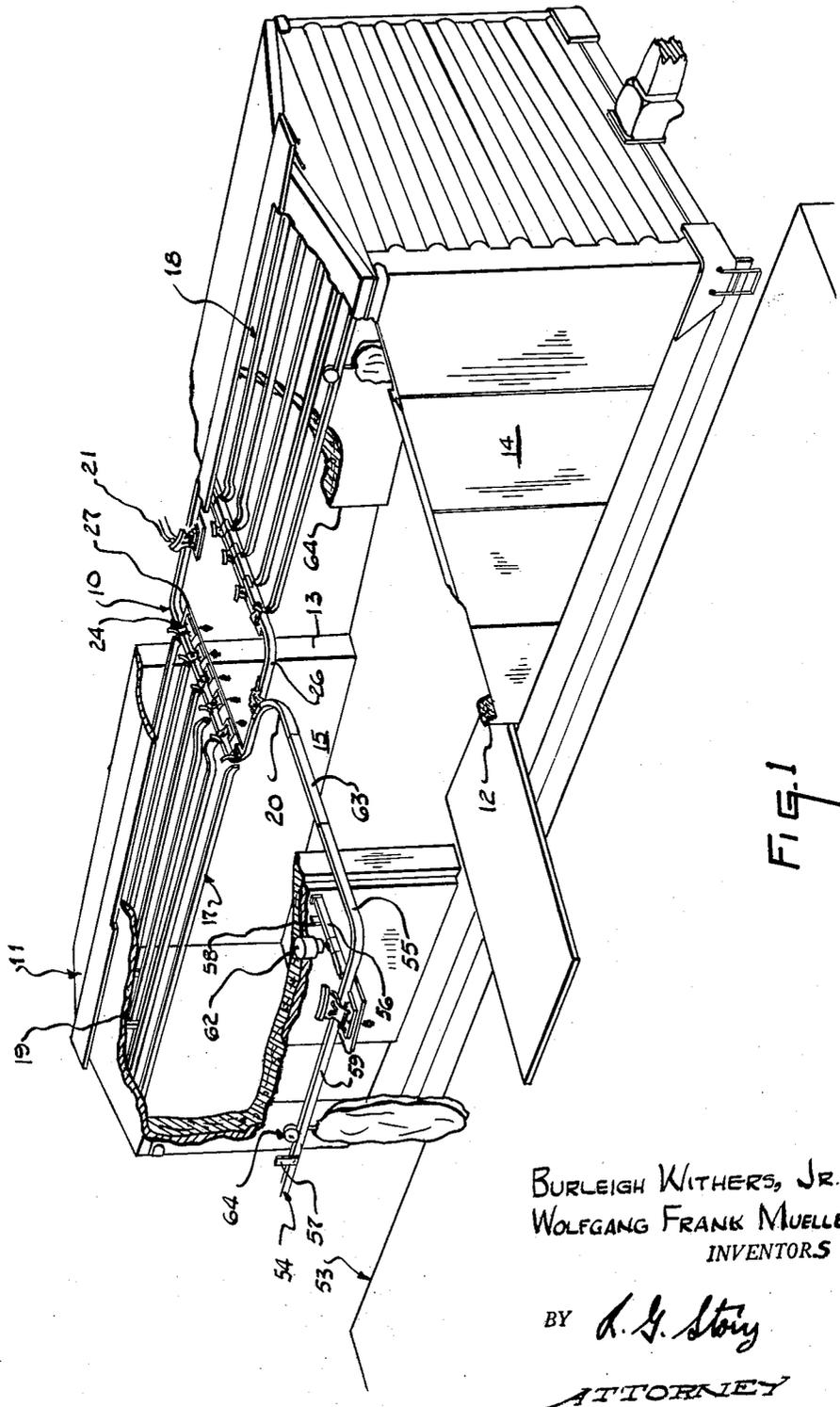
April 9, 1963

B. WITHERS, JR., ETAL
REFRIGERATOR CAR TROLLEY RAIL

3,084,635

Filed Feb. 8, 1961

5 Sheets-Sheet 1



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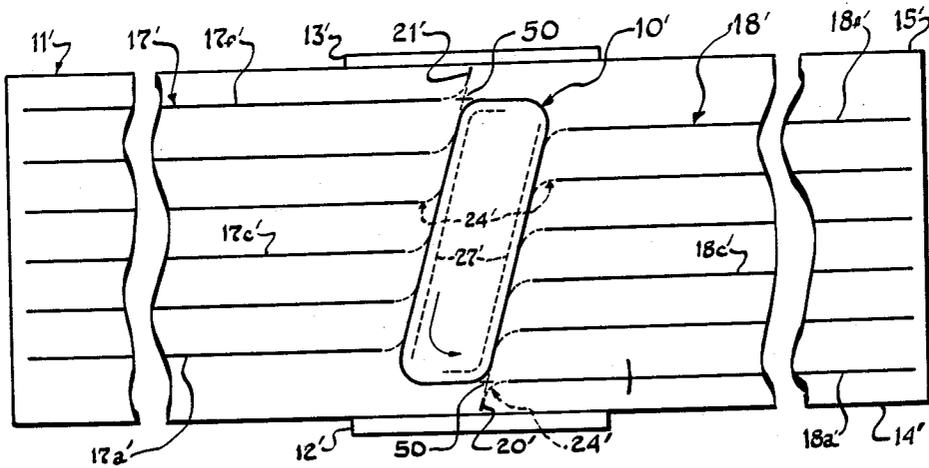
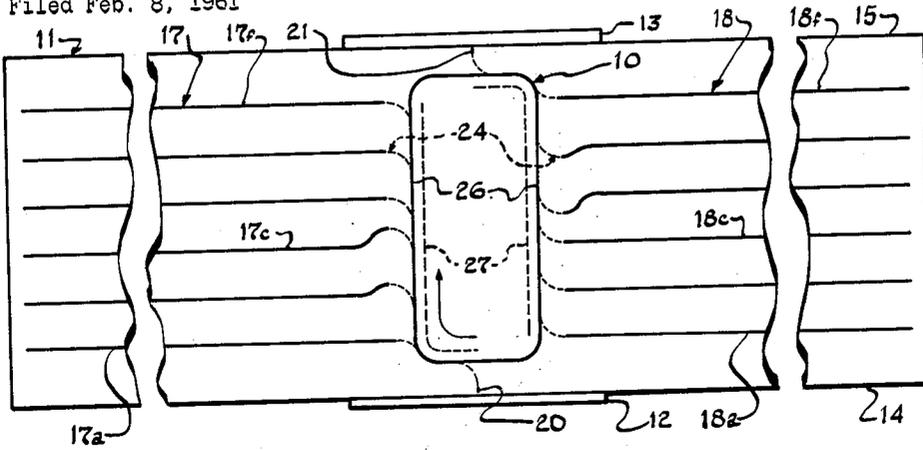
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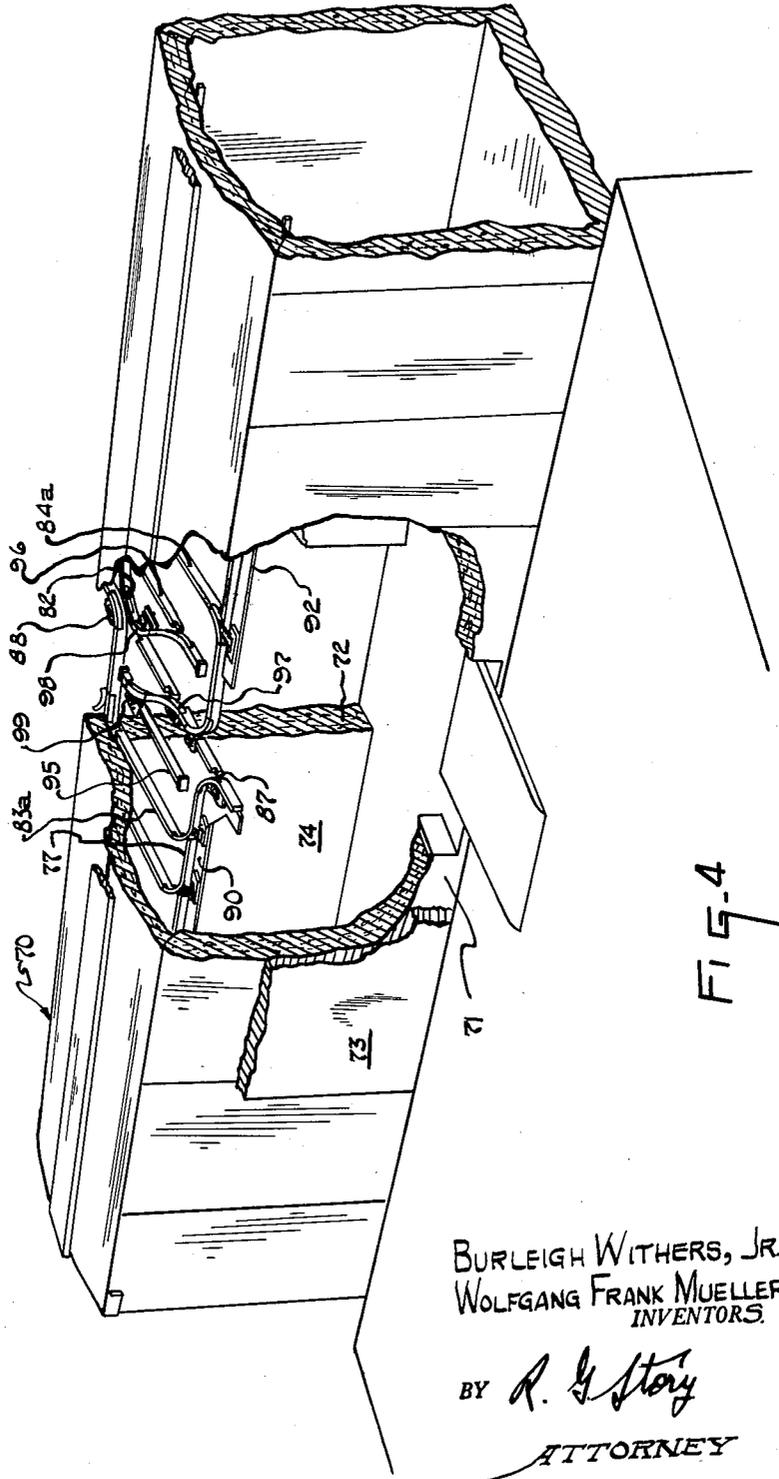
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REFRIGERATOR CAR TROLLEY RAIL

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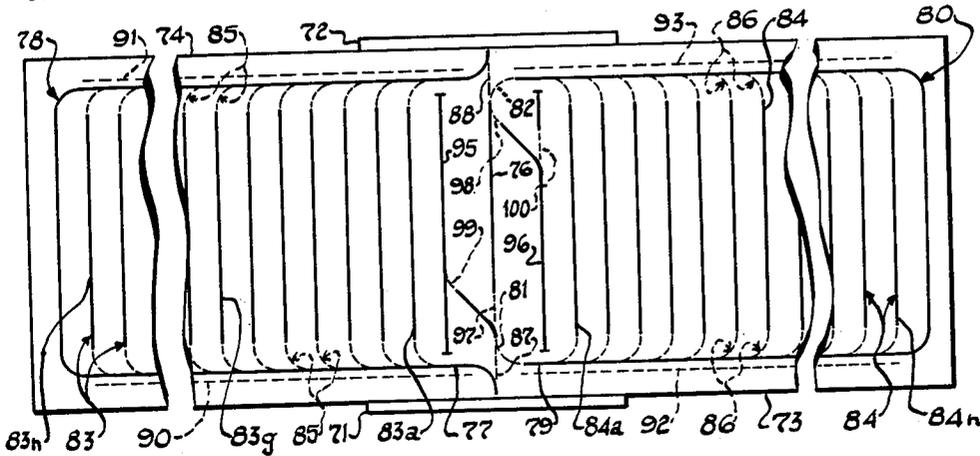


FIG. 5

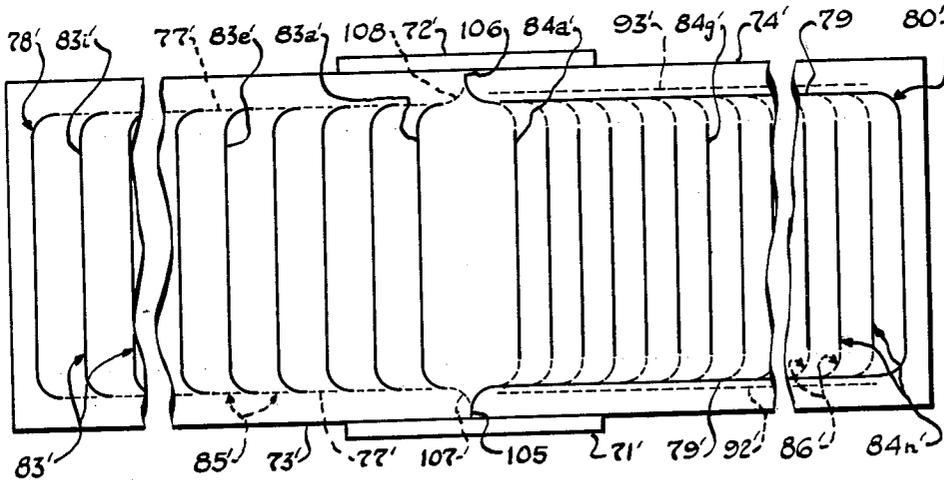


FIG. 6

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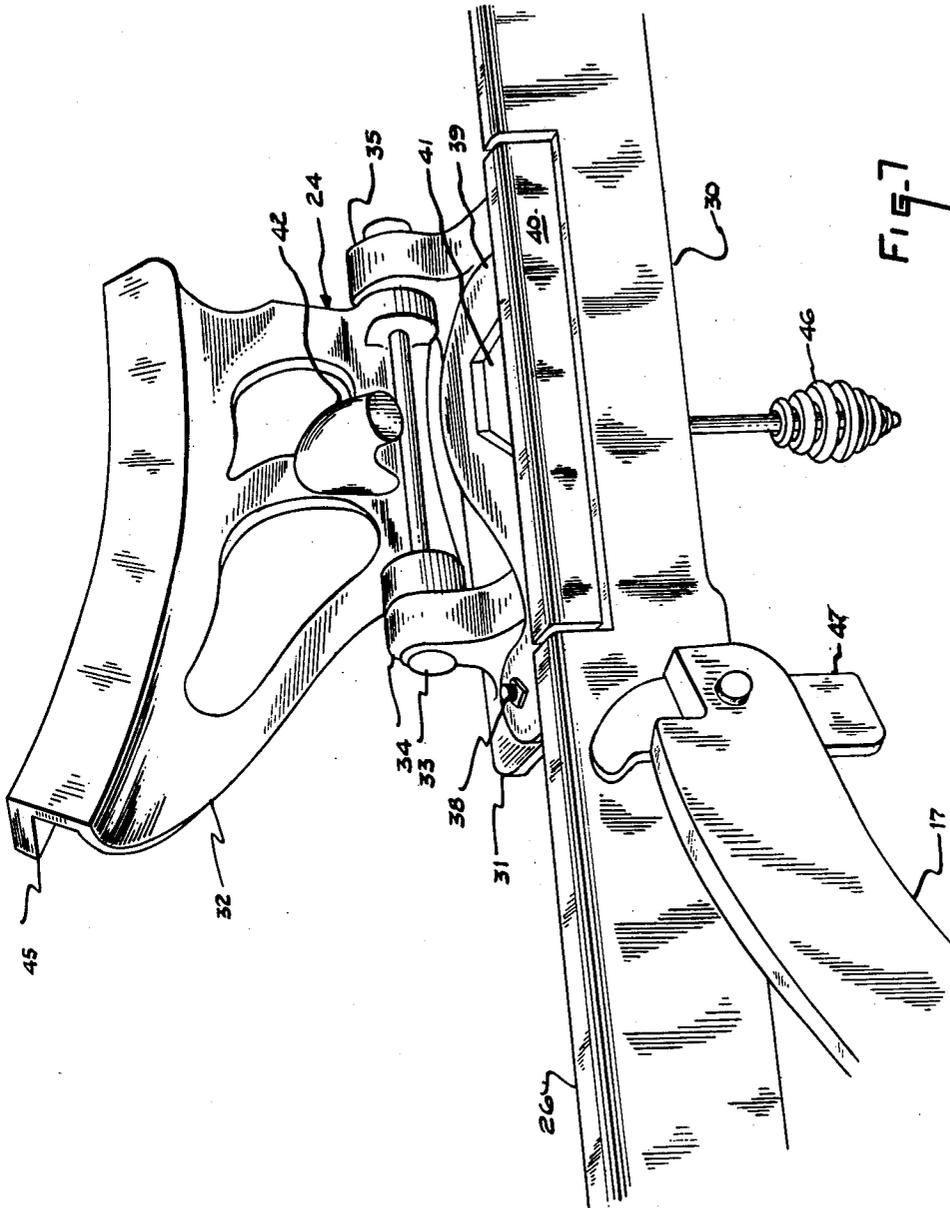
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5 Sheets-Sheet 5



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3,084,635

REFRIGERATOR CAR TROLLEY RAIL

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 Filed Feb. 8, 1961, Ser. No. 87,835
 12 Claims. (Cl. 104-39)

This invention relates to improvements in refrigerated railway cars and in particular to novel overhead rail storage systems for carcass goods within such railway cars.

To our knowledge, substantially all meat packers' refrigerated railway cars in use today contain a plurality of separate, unconnected supports from which carcass goods are suspended on hooks. Generally these supports are parallel beams longitudinally extending the length of the car. In loading and unloading these cars it is necessary for a number of laborers to manually carry the heavy carcass items from the loading dock into the car, or the reverse. Carcass goods including beef, lamb and veal are usually suspended from trolleys at loading docks and must be changed to relatively stationary hooks within railway cars. Thus the loading or unloading requires the laborers to lift the heavy items both inside and outside the car to hang them from different overhead fixtures.

While we are aware that certain other systems have previously been proposed for railway cars whereby suspended goods could be moved therein on trolleys, such systems have required a number of removable rails to be shifted between various positions within the car during loading, and removed when the car is closed for transport. Other proposed rail systems require the backtracking (reversal of movement) of a substantial number of items brought into the car from the loading dock. In each instance, a great deal of time and labor is required for both loading and unloading such cars.

Furthermore, while there are numerous known overhead rail systems adapted to fixed installations, such as factories and warehouses, such as systems are not known to be adaptable to the peculiar characteristics of relatively confined railway cars. One difficulty encountered in devising such a system is the fact that the usual railway car has access doors centrally located at each side and must be loadable or unloadable through either door with equal facility. In this respect it is readily understandable that in the course of transport, a railway car may arrive at its destination with either door adjacent the unloading facilities. Also, for purposes of economy it is necessary that the rail system allow the goods to be loaded, and similarly unloaded, by pushing substantially all items in one direction, without the necessity of frequent stops or backtracking within the railway car. Furthermore, any overhead system within a railway car must be substantially self-sufficient and not require unusual equipment at the terminal facilities.

Accordingly, it is a principal object of this invention to provide an improved overhead trolley rail system for a refrigerated railway car, such system being equally accessible from either side of such car.

Another object of this invention is to provide an improved self-contained overhead trolley rail system for a refrigerated railway car which is equally accessible from both sides of said car, and which substantially eliminates the necessity for backtracking items to be loaded or unloaded.

An additional object of this invention is to provide an improved overhead trolley rail system within a refrigerated railway car and at a loading facility for said car, enabling the loading and unloading, of said car, of items suspended from trolleys.

Basically, the improved rail system of our invention comprises a switching loop, having tangentially merged

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access spurs extending to each of the doors, and a plurality of tangentially connected storage spurs issuing therefrom. Each of the access and storage spurs is connected to the switching loop in such a manner that trolleys entering in one direction may, during passage about the loop, be diverted directly onto any storage spur while traveling in that direction. The present invention contemplates systems comprising both open and closed loops and both external and internal storage rails, that is, rails for storage as contrasted to principally distribution rails, the former being either outwardly of the distribution loop or within the area broadly encompassed by the loop. The first and preferred embodiment comprises a closed inner loop located centrally of a railroad car and having dead end storage spurs radiating longitudinally of the car from two opposite sides of the loop. The second embodiment comprises at least one open ended loop extending peripherally about an end of a railway car and having a plurality of storage spurs connected at both ends to the loop and disposed transversely of the car.

It is also contemplated, in this invention, that the overhead rail networks of the terminal facilities for servicing the railway cars containing these systems will preferably be provided with dual, oppositely suspended, loading spurs so as to be compatible with either left or right hand suspended systems in railway cars.

Additional objects and advantages of the present invention will become apparent throughout the following specification taken in conjunction with the drawings wherein:

FIGURE 1 is a perspective view, with parts removed, of a railway car incorporating the preferred trolley rail system of this invention shown alongside a loading facility;

FIGURE 2 is a diagrammatic layout of the preferred overhead rail system shown in FIGURE 1;

FIGURE 3 is a diagrammatic layout of a modified form of the preferred system;

FIGURE 4 is a perspective view, with parts removed, of a railway car incorporating a second embodiment of the overhead rail system of this invention;

FIGURE 5 is a diagrammatic layout of the overhead rail system shown in FIGURE 4;

FIGURE 6 is a diagrammatic layout of a modified form of the second embodiment; and

FIGURE 7 is a perspective view of a suitable trolley rail switch used in the overhead rail systems of this invention.

Referring to the drawings, it will be noted that in FIGURES 1 and 2, the preferred trolley rail system comprises a closed inner loop track generally indicated at 10 located centrally of a railway car generally indicated at 11 and disposed substantially transversely between the car doors 12, 13 midway of the longitudinal cars sides 14, 15, respectively. A plurality of longitudinal, dead end, storage rails generally indicated at 17, 18 extend outwardly from the left and right sides of the inner loop track 10. These rails are designated 17(a) through 17(f) for the left side, and similarly 18(a) through 18(f) on the right side. The loop itself is in the nature of an oval having a major and minor dimension with the major dimension extending transversely of the car 11.

Six longitudinal rails generally 17, 18 at each end of the railway car 11 have been found to be a desirable number to provide adequate clearance for the handling of animal carcass goods. For that purpose we space the outermost rails (17a, 17f, 18a, and 18f) about 13 inches inwardly of sides 14, 15, respectively (inside measure to centerline of the rails), permitting a centerline spacing of about 14 inches between all rails within an insulated refrigerator car having an available inside width of about eight feet. Additionally, the entire rail system is suspended from the ceiling structure of the car 11 by a plurality of spaced hangers 19, and the like (not shown

in detail) at a height of about 77½ inches from the floor, measured to the top of the rails 17, 18 and loop track 10, which is sufficient to handle most carcass items while suspended on trolleys.

A pair of access spurs 20, 21 extend from the outside ends of loop track 10 to the car doors 12, 13, respectively. Access spurs 20, 21 are also suspended from the ceiling structure by a number of similar hangers (not shown) in the same manner as the storage rails 17, 18. An additional advantage is obtained by providing the loop 10 at the center of car 11 since a sufficient area is left clear near the doors to facilitate completion of loading operations and also the initiation of unloading operations.

It may be seen in the drawings that all storage rails and access spurs are tangentially connected to the inner loop track 10. Each connection is made by an individual track switch generally indicated at 24, of the type illustrated in FIGURE 7 (the same type of switch is used in substantially all embodiments illustrated).

In the preferred system, of FIGURES 1 and 2, all of the requisite switches 24 are centrally located in the railway car 12 within the inner loop track 10. In fact that inner loop track generally indicated at 10 comprises a plurality of switches generally indicated at 24 connected by rail sections 26. Due to the heavy construction of the switches it is necessary to provide a more rigid form of suspension for the loop 10 than is generally available through the use of hangers 19 alone. Accordingly, we prefer to mount the inner loop track, including switches 24 and rail sections 26, on switch plate assembly frames 27 substantially paralleling the sides of loop 10 and comprising a metal shelf supported from the car ceiling by a plurality of bolts (not shown). Obviously the weight of the rail system may dictate that the ceiling structure of car 11 be reinforced according to those practices which are well known to persons familiar with the art. Where all switches 24 are mounted within the loop 10, and the access spurs 20, 21 and storage rails 17, 18 are connected for clockwise loading movement of trolleys, the system requires right hand hangers 19 throughout (that is the hangers are mounted on the right side of all rails when looking in the direction of movement for loading).

Further with regard to the inner loop track generally indicated at 10 it may be seen in FIGURE 2 that storage rails 17b, 17c, 18e, and 18d contain a double curve at the respective switches 24. This construction is required if the majority of switches are to be of the currently standard type and dimension. A standard two-way switch is presently manufactured with the curved portion having a 13-inch radius of curvature. Thus it is usually necessary, where 14-inch spacing between storage rails is desired, that the curved portion of a switch 24 begin along the loop 10 at a point about 1 inch beyond a projected line of intersection between the preceding storage rail and the loop track 10. However, due to the curve in the track of loop 10 at the corners near storage rails 17a and 18f it is difficult to obtain that spacing; and the switch for rails 17b and 18e usually must be set further from rails 17a and 18f, respectively. Consequently it will follow that switches to storage rails 17c and 18d must also be placed in loop 10 further than 1 inch from the lines projected from preceding rails 17b and 18e.

The switches connecting access spurs 20, 21 and storage rails 17a and 18f are preferably constructed with an 8¼ inch radius curved section. This tight curvature is necessary where a minimum space is to be devoted to loop 10, and where 14-inch spacing between storage rails is desired. Other than these four switches, all switches 24 are substantially standard items of equipment, well known in the art and available from a number of manufacturers. For example, switches such as those shown in the Globe Company Catalog #47, distributed by the Globe Company of Chicago, at pages 561 through 564

(the description thereof is included herein by reference) are suitable. In the preferred systems, illustrated in FIGURES 1 and 2, a total of 14 two-way switches are required.

The fundamental details of a switch 24 are displayed in FIGURE 7. Each two-way switch comprises a track segment 30, a mounting plate 31, and a swingable jaw 32. Switches are available with the curved track breaking to either the left or right side of the straight track and with the mounting plate located on the opposite side (these are designated L and R respectively). Also two-way switches are available with either continuous straight (type 1) or continuous curved (type 2) track. The switch of FIGURE 7 is of the 1-L type. In the preferred embodiment of FIGURES 1 and 2 all mounting plates are mounted on the switch plate assembly frame 27 inside the loop 10. This indicates a right hand suspension of all tracks throughout the system. It follows that all switches 24 for the storage rails generally 17, 18 are substantially 1-L types; and the switches at access spurs 20, 21 are 1-R type switches (of a smaller radius of curvature). Actually the switches at storage rails 17a and 18f are modified in that they are of a smaller radius and also both track members are curved to some extent.

On each switch 24 the swingable jaw 32 is pivotally mounted about a rod 33, journaled in a pair of upstanding flanges 34, 35 on plate 31, and held generally parallel to the track segment 30. Pivoted directly on the mounting plate 31 by means of a pin 38 is a slide 39. The slide is movable across the top of the mounting plate 31 and carries a rail portion 40 which fits into track segment 30. The slide also includes a cam receiver opening 41 adapted to receive an actuating cam lug 42 secured to the underside of the swingable jaw 32. The free end of the jaw 32 is formed into a jaw track 45, which will swing into place with a connectable member of the rail system when the jaw is pivoted downwardly. Also when the jaw 32 is pivoted downwardly, the cam lug 42 engages the cam receiver opening 41 and moves the slide to withdraw the rail portion 40 from alignment with track segment 30. The jaw overrides the rail portion 40, when closed, and connects the track segment 30 (which is part of loop track 10) with, for example, a storage rail 17. Operation of the jaw 32 is caused by pushing or pulling a handle 46 connected to a rearward extension of the swing jaw. Opening the jaw (to the upper position illustrated) moves slide 39 to realign rail portion 40 with the track segment 30. A weighted and pivoted track stop 47 is attached to the free end of that part of the rail system connectible by the jaw track 45. Thus when the jaw 32 is closed the jaw track 45 will pivot the track stop to inoperative position; but when opened the track stop will automatically swing into position to block trolleys on that part of the system.

A modification of the preferred embodiment is shown in FIGURE 3 wherein elements corresponding to those in the previously described preferred embodiment are designated with like reference characters bearing a prime exponent. In the modified system an inner loop track 10' is disposed at an angle to a line extending between the centers of doors 12', 13' of a railway car generally indicated at 11', again with the major dimension of the loop oval disposed between the car doors. This modified system as illustrated, however, is adapted to trolley movement in the opposite sense from the preferred embodiment of FIGURES 1 and 2. That is, when loading the modified system, trolleys are moved counterclockwise about loop track 10'. It follows that for most of the switches generally indicated at 24' to be mounted within the loop 10' a left hand system of supports is required throughout, and most of the switches 24' leading to the storage rails will be of the 1-R type. However, it may be seen that the switches leading from the loop 10' to rails 17f' and 18a' are of the 2-L type.

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Access spurs 20', 21' in the modified system, however, are connected in line with opposite sides of the inner loop 10' and for this reason it is necessary to provide direct connections between rails 17f' and 18a' and the respective access spur 21', 20' as well as to the respective ends of the loop track 10'. Accordingly, for the same number of storage rails generally indicated at 17', 18' as in the preferred embodiment, four additional two-way switches are required plus a pair of "cut through" switches generally indicated at 50. Cut through switches are manually operable switch elements located at the intersection of two nonparallel rails which permit alternate use of either rail. They are also standard items of equipment described, for example, in the aforementioned Globe Company Catalog. In this instance storage rails 17f' and 18a' cross the respective spurs 21' and 20'.

The additional two-way switches 24' and cut through switches 50 are located on spurs 20', 21' adjacent and at the point of intersection of the spurs and storage rails 18a', 17f'. Two of the additional two-way switches are required at each of storage rails 18a' and 17f', respectively, to provide a direct connection to the respective adjacent storage rail. The cut through switches 50 permit passage of trolleys in either direction between the loop 10' and either an access spur 20', 21' or a storage rail 17f', 18a'. For example, if loading operations are carried on through door 12', the cut through switch 50 in access spur 20' would be turned to permit trolleys to pass over the access spur on to loop track 10'; and trolleys for the adjacent storage rail 18a' would, at the proper time, be diverted directly from the access spur onto that rail without passing about the loop. However, the cut through switch at access spur 21' would be turned to permit trolleys coming off loop track 10' to traverse the length of storage rail 17f'.

Railway cars containing overhead rail systems according to this invention may be utilized to their best advantage when the terminal facilities include overhead rail networks compatible with the system within the cars. However, it is contemplated that all cars and/or plant facilities will not have the same rail suspension system, e.g., left or right hand hangers. Therefore, as may be seen in FIGURE 1, the terminal should include a loading dock generally indicated at 53, substantially at the floor level of a railway car 11, and an overhead dock rail network generally indicated at 54 extending to about the edge of the dock at a position calculated to be approximately in line with an access spur, such as 20, of a parked railway car. The dock rail network 54 preferably includes a pair of dock spurs 55, 56, one of which is suspended from right hand hangers 57 and the other suspended from left hand hangers 58, both stemming from a main rail 59 which is suspended consistently along one side throughout its length. For convenience of illustration in the drawing, both the main rail 59 and dock spur 55 are suspended from right hand hangers 57. The other dock spur 56, oppositely suspended upon left hand hangers 58, is provided with a trolley reversing mechanism generally indicated at 62 between it and the main rail 59. The reversing mechanism may be of the type illustrated in Patent No. 2,407,620, included herein by reference. Thus regardless of the suspension of both railway cars and plant overhead rail system, trolleys may be transferred directly to or from any car without being removed from the overhead rail. In practice it is merely necessary to place a short connecting rail 63 between the adjacent railway car access spur 20 (or 21) and the compatible dock spur 55 (or 56 for left hand car systems such as the modified system shown in FIGURE 3).

The procedure to be followed in utilizing either of the foregoing systems will have become obvious from the foregoing description. The practice for both the preferred and modified system cars is to park the railway car 11 at the terminal dock 53 with an access spur substantially in line with a dock spur. As may be seen in

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FIGURE 1, when the car is opened a short removable connecting rail 63 is secured between the end of the access spur 20 in the railway car and the end of the dock spur 55. The switch coupling the access spur 20 with the inner loop 10 is closed and the car 11 is ready for either loading or unloading.

When loading, carcass goods are moved onto the inner loop 10 on individual trolleys generally indicated at 64 from the loading dock main rail 59 via the appropriate dock spur 55. Switches generally indicated at 24 to all of the storage rails, excepting the one furthest removed from the entry access spur 20, and the opposite nonutilized access spur 21, are moved to disconnect the respective rails and direct the trolley around the inner loop 10. Thus when loading is started, the first suspended carcass enters on connecting spur 20 and is pushed completely around the inner loop 10 and on to storage rail 18a. This procedure may be repeated until rail 18a is completely loaded; however, we have found that cars are more readily loaded by distributing successive loaded trolleys systematically to adjacent storage rails, for instance rails 18a-18f, at one end of the car to uniformly load from the end to the center of the car. Unloading of the railway car system is accomplished in the reverse order of loading.

Another embodiment of the present invention is shown in FIGURES 4 and 5. In this system a refrigerator railway car generally indicated at 70, having centrally located doors 71, 72 in longitudinal sides 73, 74, respectively, is transversely bisected by a single access spur 76 extending substantially fully between the doors. A first header rail 77 is disposed inwardly along the sides and end at the left side of the car (as viewed in the drawings), and forms an open loop generally indicated at 78 which is outwardly curved at the car doors and joined to the opposite ends of access spur 76. A second header rail 79 extends around the right end of the car 70 and is curved inwardly at both ends between the car doors to join with access spur 76 at switches 81, 82 in the form of a closed loop generally indicated at 80. It may be seen in the drawings that the major dimensions of both loops 78, 80 are disposed longitudinally of the car 70. A plurality of storage rails generally indicated at 83, 84 are disposed transversely of the car and joined at each end to header rails 77, 79, respectively, at opposite sides of the loops 78, 80.

The usual refrigerator car provides an internal area approximately 29 feet long and eight feet wide. We have found that in a transverse overhead storage rail system for carcass goods it is desirable to maintain about 8-10 inches between the center of the header rails 77, 79 and the interior walls of the car. Furthermore, in this type of system 10-inch spacing between storage rails is adequate. Accordingly, we have found that in the usual car fourteen storage rails may conveniently be provided at each, end of the car within the loops 78, 80. In the drawings the storage rails are designated 83a through 83n on the left and 84a through 84n on the right.

A plurality of substantially standard radius track switches generally indicated at 85 (on the left side) and 86 (on the right side) are employed throughout the system to interconnect the various storage rails 83, 84 to the header rails 77, 79, respectively.

These switches are of substantially the same type shown in FIGURE 7 and are divided approximately equally between 1-R and 1-L models to obtain uniform suspension through the system. Switches 81 and 82 in closed loop 80 are also 1-L and 1-R types respectively. However, track switches 87 and 88, which connect the open loop 78 and the ends of access spur 76 are preferably of a special low radius to enable the header rail to be within 8-10 inches of the sides 73, 74 adjacent the respective doors 71, 72. For this purpose it may be more convenient to use a 2-R and 2-L type switch at doors 72 and 71 respectively.

The longitudinal portions of loop 78 are supported

upon substantially straight assembly frames 90, 91 extending parallel to car sides 73, 74 respectively and bolted to the car ceiling structure. The track of loop 78 is secured to the inside edge of the assembly frames 90, 91 and the mounting plates of the various switches 86 are fastened to the frames outwardly of the loop. The closed loop 80 is similarly secured to the inside edges of a pair of assembly frames 92, 93 which are also suspended parallel to sides 73, 74 respectively. All transverse portions of loops 78, 80 and the storage rails 83, 84 are conventionally suspended by hangers.

With respect to the access spur 76 it may be seen in FIGURE 5 that a substantial area is available for storage to either side thereof, and within the innermost storage rails 83a and 84a even in excess of a sufficient space to facilitate loading operations. Therefore, in those areas we provide generally Y-shaped storage spurs 95, 96 each connected by one wing to the access spur 76 with two-way switches 97, 98, respectively. The stem of each storage spur 95, 96 is similarly connected to the aforementioned wing by two-way switches 99, 100, respectively. It will be obvious that, according to which side of the car 70 that is beside a loading dock, a portion of the items distributed to each storage spur 95, 96 will require back tracking; and all of the items distributed to the furthest located storage spur, with respect to the open side of the car 70, will have to be backtracked from the access spur 76 onto the connecting wing of that spur. It may also be noticed that according to which door 71 or 72 from which the rail system is viewed it will appear as either a left or right hand suspended system, whereas the preferred system appears the same regardless of the door from which it is viewed.

The storage spurs may be conveniently suspended from the car ceiling structure upon hangers. However, it is recommended that, due to the number of switches 87, 88, 97, and 98 forming part of the access spur 76, a plurality of additional, disconnected, assembly frame sections 102, bolted to the ceiling structure, be utilized to support the access spur and those switches. In the system illustrated the frame sections are situated on the left of the access spur 76 and disrupted at switches 87, 97, and 88 to complete a left hand suspension throughout the entire rail system.

The procedure for loading or unloading this embodiment of the invention is carried out similarly to that described for the preferred embodiment and will be obvious from the foregoing descriptions. As may be seen in FIGURE 5, either the left or right end of the car is generally completely loaded before the other end is started. However, by alternately opening and closing the appropriate switch leading to the open loop 78 (switch 87 in FIGURE 4), and closing the switch 82 leading to the opposite side of the closed loop 80, carcass goods may be diverted alternately to the left and right ends. When loading the left end from door 71, for example, switch 87 is moved to direct trolleys from the access spur 76 onto the first header rail 77. The end portion of the header rail 77 is loaded first, followed sequentially by the storage rails 83 through 83a. When loading the right side of car 70 from door 71, trolleys are directed across the access spur 76 and onto the far side of header rail 89. The end portion of header rail 89 is loaded, followed by the storage rails 84n through 82a, in that order (outside to inside). The storage spurs 95, 96 are last to be loaded with the one furthest from the door (spur 96) being completely loaded before the closer spur (spur 95) is started. Unloading of the car is accomplished in the reverse order from the inside rails closest to the appropriate door to the outermost portions of the header rails 87, 89.

A modification of the second embodiment of this invention is shown in FIGURE 6. This modification, however, will require a reduction in the number of storage rails at one end of the car (rails 83') as compared to the second embodiment. The number of rails on the oppo-

site side (rails 84') will remain substantially the same as before. This is because the layout of FIGURE 6 differs from FIGURE 5 in that a connecting spur does not laterally traverse the railway car, and both sides of the modification shown in FIGURE 6 more closely resemble the left side of the embodiment shown in FIGURE 5. However, since the header rails 78', 79' lead directly from an access spur 105, 106 at each door, it will be seen that if a uniform suspension system is to be maintained throughout the car, all hangers and switch mounting plates 31 will be outside of the loop on one side (header rail 79') and inside the loop on the other side (header rail 77'). Type 2-R and 2-L switches may advantageously be used on the latter side (switches 85') since they are constructed with hangers inside the curve, but will require wider spacing between transverse rails. The spurs are in turn connected to both left and right header rails 77, 79 by three-way switches generally indicated at 107, 108 wherein both branches of track extending therefrom are curved in opposite directions. These three-way switches are also modified standard items of equipment built with a smaller radius of curvature than usual, and available from several manufacturers including the Globe Company (examples are illustrated in the Globe Company Catalog, supra). A 3-R type switch will be required at one side (switch 107 as illustrated) and a 3-L type at the opposite door.

In this modification the storage rails and header rails are suspended substantially as previously described. However, it is necessary to independently suspend the track and switches 85' inwardly of the loop at one end of the car (as to the left along header rail 77' in FIGURE 6) instead of using assembly frames. Each side of the system will comprise an open loop equally accessible from either door 71', 72' leaving an even larger unused area at the center of the car between the doors for convenience in allowing entry to the car for completing loading and starting unloading operations.

Loading procedures for the modified systems will be obvious from the figures and the explanation of the second embodiment.

Obviously many modifications and variations of the invention as hereinbefore set forth may be made without departing from the spirit and scope thereof, and, therefore, only such limitations should be imposed as are indicated in the appended claims.

We claim:

1. An improved overhead rail system for railway cars or the like having access doors located in opposite sides thereof, said rail system comprising: a loop within said railway car for carrying overhead trolleys within the railway car; a pair of access spurs, one access spur at each of said access doors, said access spurs being tangentially connectible to the loop; a plurality of spaced storage rails within said railway car extending from said loop, said storage rails being tangentially connectible with said loop in a manner to permit trolleys moving about said loop from either of said access spurs to be directed thereon while so moving; and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails to said loop whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in a single direction.

2. An improved overhead rail system for railway cars or the like having access doors located in opposite sides thereof, said rail system comprising a loop track extending from adjacent one of said opposite sides to adjacent the other of said opposite sides; a pair of access spurs connectible to said loop, one access spur at each of said access doors, said access spurs being tangentially connectible to the loop; a plurality of spaced storage rails within said railway car extending from said loop, said storage rails being tangentially connectible with said loop in a manner to permit trolleys moving about said loop from either of said access spurs to be directed thereon while so moving;

and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails to said loop whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

3. An improved overhead rail system for railway cars or the like having access doors located in opposite sides thereof, said rail system comprising: a loop closed upon itself extending from adjacent one of said opposite sides to adjacent the other of said opposite sides; a pair of access spurs tangentially connectible to said loop, one access spur at each of said access doors; a plurality of spaced storage rails within said car extending from said loop, said storage rails being tangentially connectible with said loop in a manner to permit trolleys moving about said loop from either of said access spurs to be directed thereon while so moving; and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

4. An improved overhead rail system for railway cars or the like having access doors located in opposite sides thereof, said rail system comprising: a loop closed upon itself extending from adjacent one of said opposite sides to adjacent the other of said opposite sides; a pair of access spurs tangentially connectible to said loop in a manner tending to direct trolleys in a given direction about said loop, one access spur at each of said access doors; a plurality of spaced storage rails within said car extending from said loop, said storage rails being tangentially connectible therewith in a manner to permit trolleys moving in said direction about said loop from either of said access spurs to be directed thereon while so moving; and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

5. An improved overhead rail system for railway cars or the like having access doors located in opposite sides thereof, said rail system comprising: a loop closed upon itself and disposed centrally within the car for carrying overhead trolleys therein; a pair of access spurs, one access spur at each of said access doors, both of said access spurs being tangentially connectible to the loop in a manner tending to direct trolleys in the same given direction around said loop; a plurality of spaced storage rails extending longitudinally within said vehicle, said storage rails being tangentially connectible with said sections to permit trolleys moving in said direction about said loop to be directed thereon while so moving; and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

6. An improved overhead rail system for railway cars or the like having access doors centrally located in opposite sides thereof, said rail system comprising: a loop closed upon itself and disposed centrally within the car for carrying overhead trolleys therein, said loop having a major and minor dimension and positioned with the major dimension extending between said access doors; a pair of access spurs, one access spur at each of said access doors, both of said access spurs being tangentially connectible to the loop in a manner tending to direct trolleys in the same given direction around said loop; a plurality of spaced storage rails extending longitudinally within said car and outwardly of said loop; said storage rails being tangentially connectible with said loop to permit trolleys moving in said direction about said loop to be directed thereon while so moving; and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith, where-

by all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

7. An improved overhead rail system for railway cars or the like having access doors located in opposite sides thereof, said rail system comprising: at least one rail loop closed upon itself for carrying overhead trolleys within at least a part of the car; an access spur connectible to said loop at each of said doors, said access spur being tangentially disposed to the loop in a manner enabling trolleys to be directed in either direction around said loop; a plurality of spaced storage rails within said railway car, the ends of said storage rails being tangentially connectible with said loop to permit trolleys moving in either direction to be directed thereon while so moving; and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

8. An improved overhead rail system for railway cars or the like, having access doors located in opposite sides thereof, said rail system comprising: at least one loop closed upon itself for carrying overhead trolleys within at least a part of the car, said loop having a major and minor dimension and positioned with the minor dimension extending between said opposite sides; a pair of access spurs connectible to said loop, one access spur at each of said access doors, said access spurs being tangentially disposed to the loop in a manner tending to direct trolleys in opposite directions around said loop; a plurality of spaced storage rails within said railway car, the ends of said storage rails being tangentially connectible with said loop to permit trolleys moving in either of said directions to be directed thereon while so moving, and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

9. An improved overhead rail system for railway cars or the like, having access doors centrally located in opposite sides thereof, said rail system comprising: at least one loop closed upon itself for carrying overhead trolleys within at least a part of the car, said loop having a major and minor dimension and positioned with the minor dimension extending between said opposite sides; a pair of access spurs connectible to said loop; one access spur at each of said access doors, said access spurs being tangentially disposed to the loop in a manner tending to direct trolleys in opposite directions around said loop; a plurality of spaced storage rails within said loop extending inwardly between opposite sections of the loop and generally transverse to the length of said vehicle, the ends of said storage rails being tangentially connectible with said sections to permit trolleys moving in either of said directions to be directed thereon while so moving, and a plurality of switches forming sections of said loop and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in one direction.

10. An improved overhead rail system for railway cars or the like, having access doors located in opposite sides thereof, said rail system comprising: an open loop consisting of a header rail unconnected at the ends thereof, said header rail extending about at least one end of said railway car; a pair of access spurs, one of said spurs being connectible to each end of said header rail and tangentially positioned with respect thereto to direct trolleys onto said header rail in a direction toward each opposite end, said access spurs extending to the doors in said opposite sides; a plurality of storage rails connectible at the ends thereof to said header rail, said storage rails positioned transversely of said railway car and connectible tangentially with said header rail so as to receive trolleys directed

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from either of said access spurs while moving in the given direction; and a plurality of switches forming sections of said header rail and located to selectively connect said access spurs and said storage rails therewith whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in a single direction.

11. An improved overhead rail system for railway cars or the like having access doors centrally located in opposite sides thereof, said rail system comprising: an access spur transversely bisecting said car with the ends thereof positioned at said access doors; a first header rail extending about one end of said car, the ends of said header rail curved outwardly at said doors and tangentially connectible with the ends of said access spur; a plurality of spaced first storage rails in said one end of said car and disposed transversely thereto, the ends of said first storage rails being curved toward said doors and tangentially connectible to said first header rail adjacent the sides of said car; a second header rail extending about the other end of said car, the ends of said second header rail curved inwardly at said doors and tangentially connectible with said access spur to form a closed loop; a plurality of spaced second storage rails in said other end of said car disposed transversely thereto, the ends of said second storage rails being curved toward said doors and tangentially connectible to said second header rail adjacent the sides of said car; and a plurality of switches forming parts of said first and second header rails and located to selectively connect said

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access spur and said first and second storage rails to said respective header rails whereby all of said storage rails may be sequentially loaded or unloaded by moving trolleys in a single direction throughout the system.

12. The combined overhead rail systems of a railway car and terminal facility, said combined systems comprising: a loading dock; a railway car adjacent said loading dock, said railway car having a centrally disposed access door opened to said dock; an overhead rail system within said railway car, said overhead rail system having a uniform suspension system throughout and presenting an access spur at said door; an overhead terminal rail network leading from above said loading dock; two oppositely suspended dock spurs extending to the edge of said dock adjacent said car door, one of said dock spurs being suspended according to the same system as said rail network and connected directly thereto, and the other of said dock spurs being oppositely suspended and connected to said rail network through a trolley reversing means; and a short length of connector rail removably fastened between said railway car access spur and the compatible one of said dock spurs.

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