

July 19, 1966

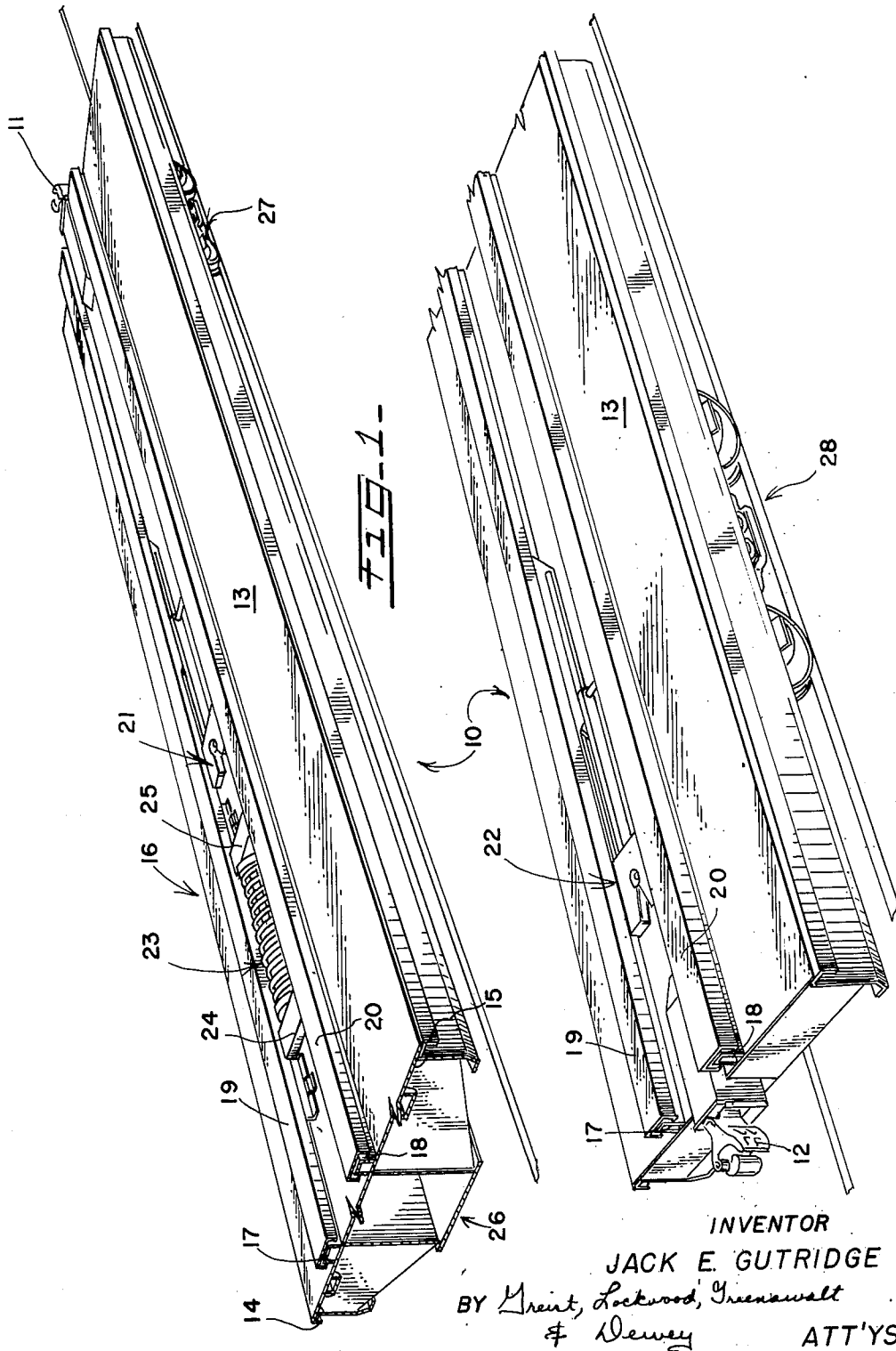
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3,261,306

CUSHION RACK ARRANGEMENT

Filed Aug. 12, 1964

6 Sheets-Sheet 1



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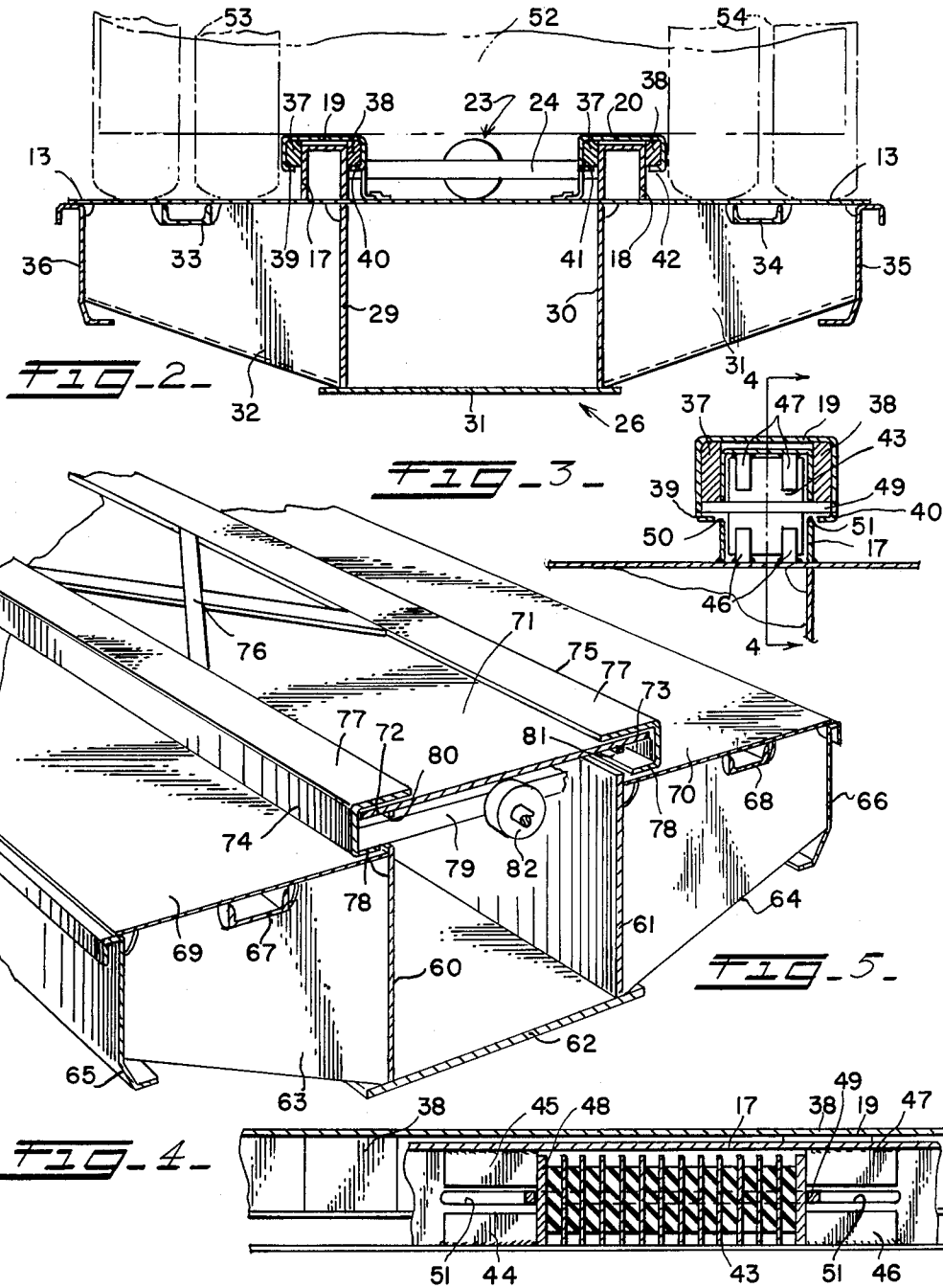
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CUSHION RACK ARRANGEMENT

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6 Sheets-Sheet 2



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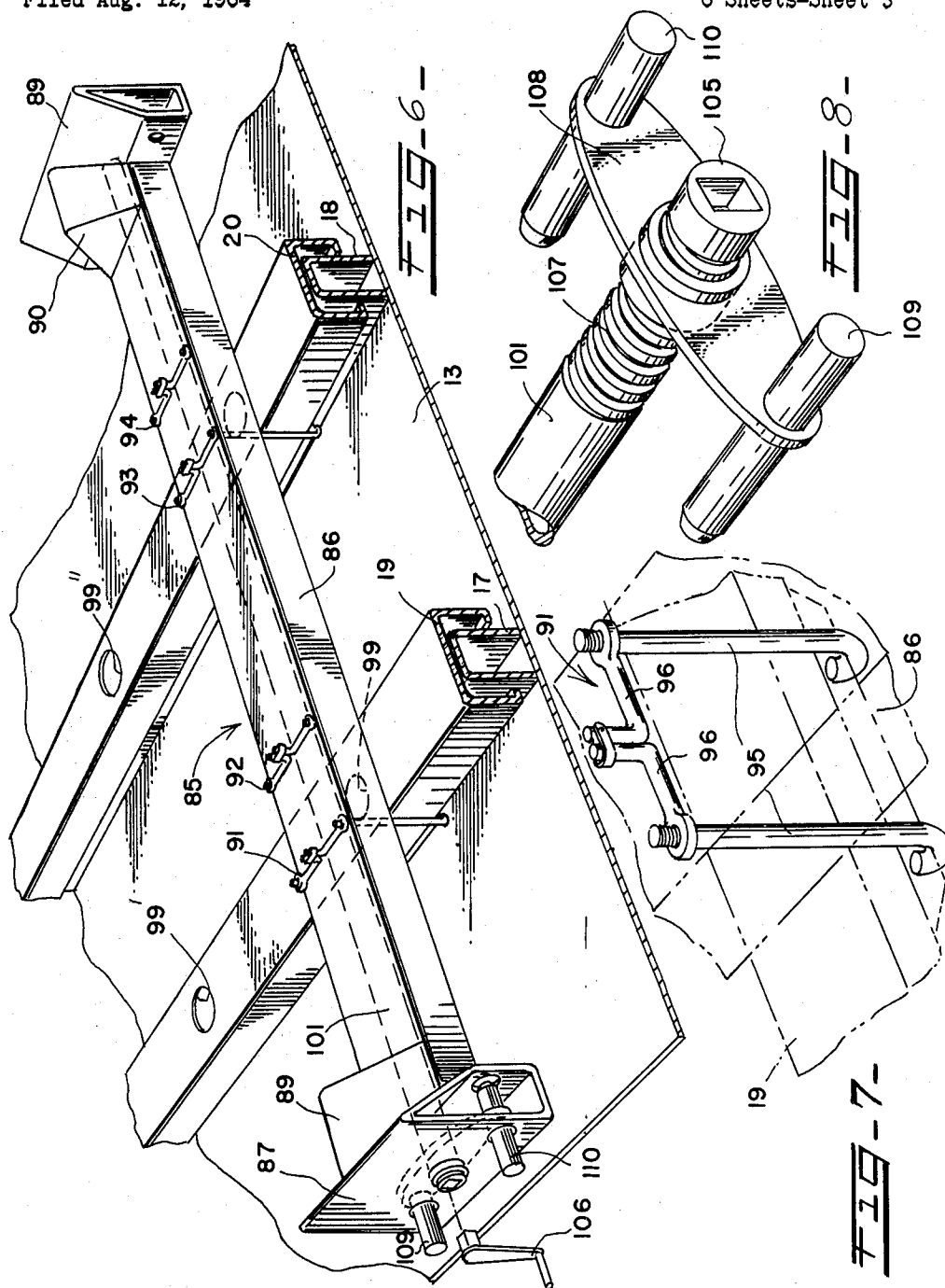
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CUSHION RACK ARRANGEMENT

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6 Sheets-Sheet 3



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CUSHION RACK ARRANGEMENT

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CUSHION RACK ARRANGEMENT

Filed Aug. 12, 1964

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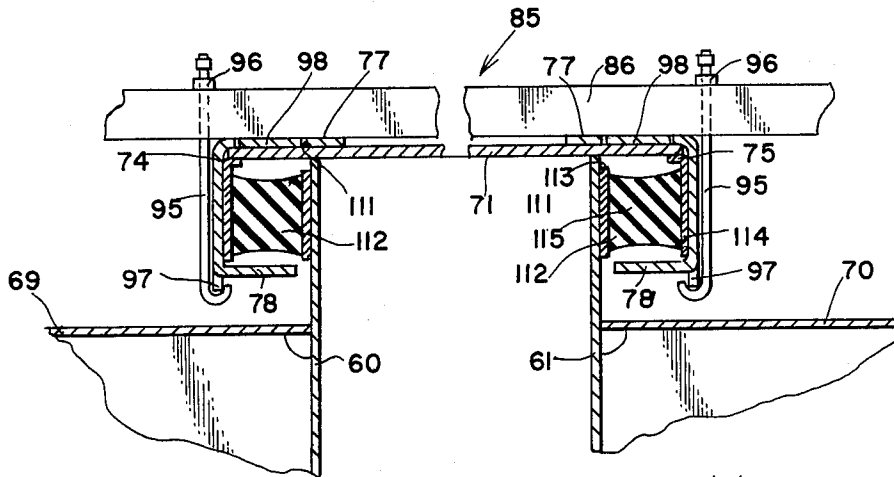


FIG. 11.

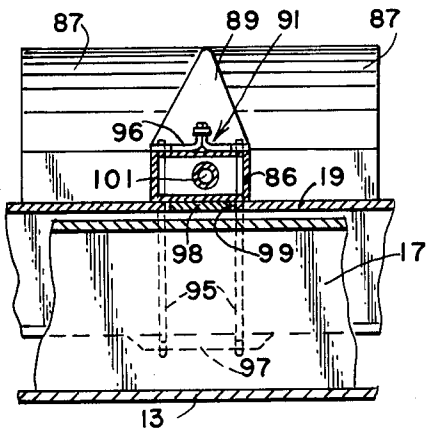


FIG. 13.

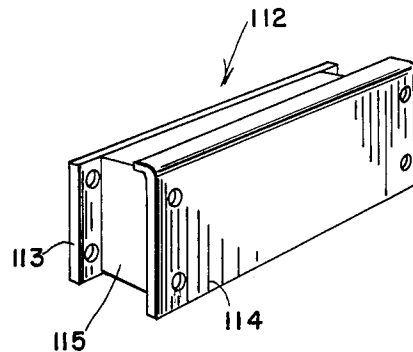


FIG. 12.

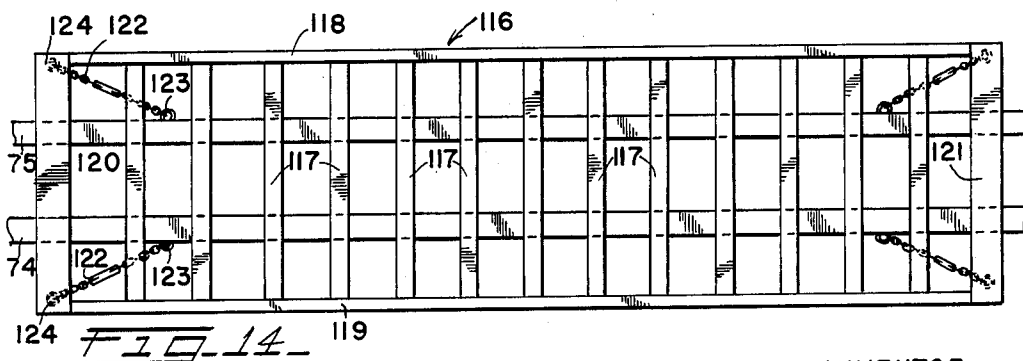


FIG. 14.

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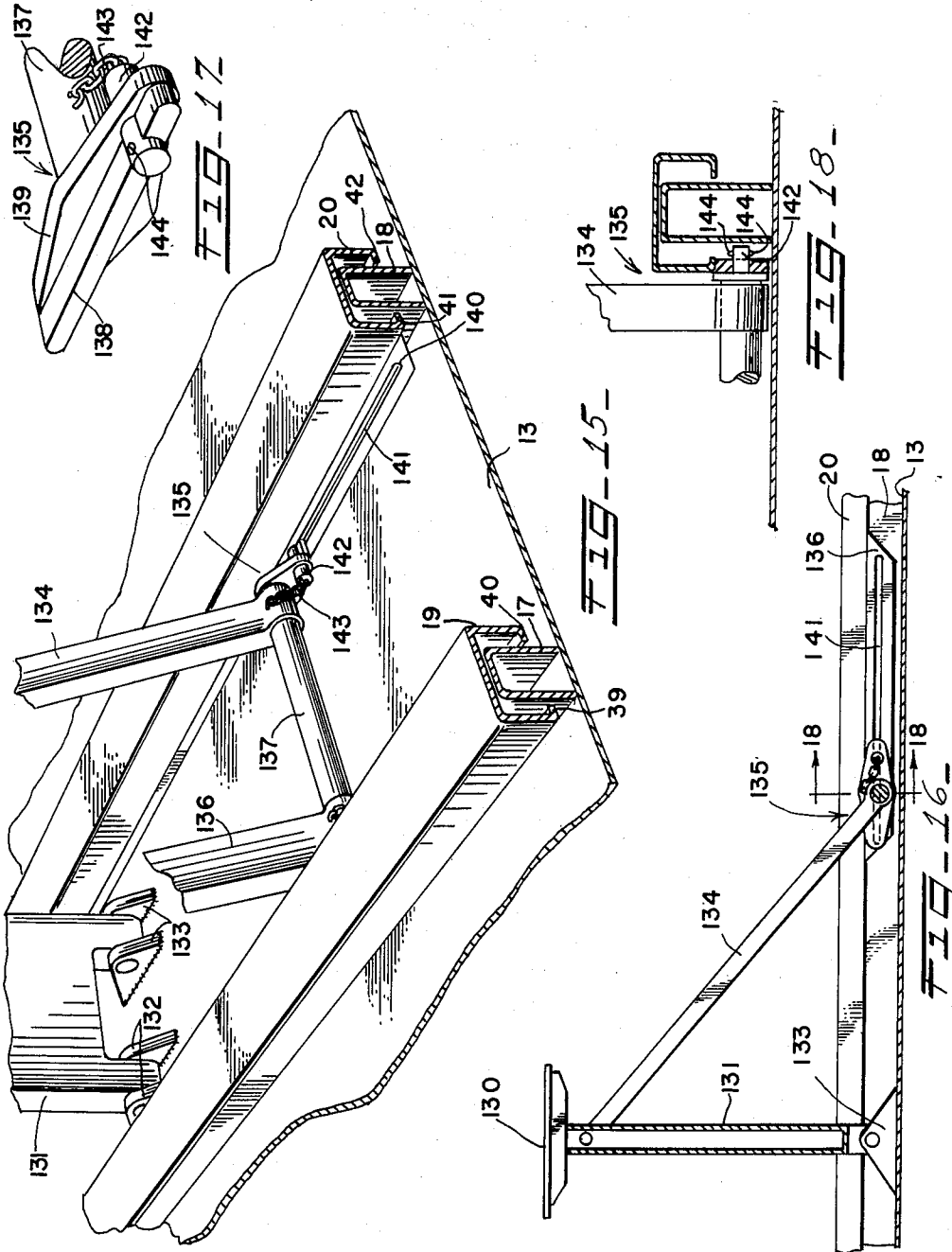
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CUSHION RACK ARRANGEMENT

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6 Sheets-Sheet 6



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3,261,306

CUSHION RACK ARRANGEMENT

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3 Claims. (Cl. 105—368)

The present invention relates to a new and improved cushion rack arrangement, particularly adapted for use in railway cars designed for piggyback-type lading operations. More specifically, the present invention is directed to a new and improved railway car cushion rack assembly and lading attachment components therefor, the cushion rack assembly being particularly adaptable for being uniformly loaded to transmit and distribute the load to the car underframe. In the present design, the cushion rack is usable with containerized lading and other piggyback-types of lading while requiring a minimum of special types of lading attachment means and the like which permits substantially universal use of the car.

The transportation industry as a whole has long recognized the advantages to be gained by a lading system that could be easily and economically adapted to accommodate all of the existing forms of lading regardless of length or size. Attempts at designing a universal-type railway car to accommodate all forms of piggyback lading have not achieved that degree of success that is sought in the transportation industry. To a large degree these attempts have fallen short because of an inherent lack of flexibility in the proposed car constructions or if apparently successful in the design stage, the car construction exceeds all reasonable limits as to cost when manufacturing is considered.

Additional problems are presented by the necessity for an expensive modification of railroad yard facilities or the necessity of re-vamping existing piggyback facilities to accommodate the loading operation. In most instances, the existing type of car designs, with few exceptions, do not allow for handling various sizes and shapes of containerized lading without requiring additional components which not only add to the initial cost, but to the deadweight of the car with a consequent reduction in pay load. It has been found that simplicity and flexibility of any design is most desirable since it is most adaptable to different forms of containerized lading while being more economical than the complex predecessor designs.

The advantages and benefits obtained by the novel car and cushioned rack construction of the present invention will become more readily understood when consideration is given to the objects to be attained, and a detailed description of the novel construction to achieve the same.

It is an object of the present invention to provide a new and improved railway car having a novel cushion rack thereon which adapts the railway car for universal use with diverse types of containerized lading units.

Another object of the invention is to provide a new and improved railway car design adapted for use in piggyback lading operation, the car being of a simplified and flexible design and mounting an improved cushion rack arrangement to accommodate a wide variety of forms and types of containerized lading units.

Still another object of the invention is to provide a new and improved cushion rack arrangement which includes means to support containerized lading units at closely spaced points in order to uniformly distribute the loads over the car length, and in addition, to provide fifth wheel assemblies which cooperate in a novel manner with the cushion rack arrangement.

Still a further object of the invention is to provide a cushion rack design which is particularly adapted for mounting over the center sill of the railway car in ver-

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tical load transmitting relationship to a top cover plate joining spaced vertical web portions, with the rack being freely movable to accommodate and cushion impacts applied in buff and draft while retaining uniform load distribution.

Other objects not specifically set forth will become readily apparent from the following detailed description of the invention made in conjunction with the accompanying drawings wherein:

FIG. 1 is a broken perspective view of a railway car having a cushion rack arrangement of the present invention thereon;

FIG. 2 is a cross sectional view taken through the deep section of the car of FIG. 1 with a container shown in phantom lines and the wheels of a piggyback-type highway trailer also shown in broken phantom lines;

FIG. 3 is a cross sectional view through a portion of the rack illustrating a modified form of cushioning means;

FIG. 4 is an enlarged view taken along the lines 4—4 of FIG. 3;

FIG. 5 is a cross sectional view in perspective of a fragmentary portion of a railroad car having a modified form of cushion rack thereon;

FIG. 6 is an enlarged perspective view of a shear bolster mounted on a fragmentary central portion of the cushion rack of FIG. 1 with portions of a container locking pin arrangement shown in dotted lines;

FIG. 7 is an enlarged perspective view of the manner of attaching the shear bolster of FIG. 6 shown in broken phantom lines to one side of the rack which is also shown fragmentarily in phantom;

FIG. 8 is an enlarged free body fragmentary perspective view of one end of the container pin locking arrangement which is shown in dotted lines and solid lines in the left-hand portion of the perspective view of FIG. 6;

FIG. 9 is a broken top plan view of the shear bolster of FIG. 6;

FIG. 10 is a broken longitudinal elevational view of the shear bolster of FIG. 9 with the cushioned rack and portions of the car illustrated in fragmentary cross section;

FIG. 11 is a cross sectional view similar to FIG. 10, illustrating the shear bolster arrangement as applied to the modified form of cushion rack assembly illustrated in FIG. 5;

FIG. 12 is an enlarged free body perspective view of a cushion element used in the modified rack assembly of FIG. 11;

FIG. 13 is a view taken along the lines 13—13 of FIG. 9;

FIG. 14 is a skeletal plan view of a modified method of securing containerized lading to the cushion rack arrangements;

FIG. 15 is a fragmentary perspective view of a fifth wheel stand mounted on the car and having a diagonal brace portion detachably connected to the cushion rack;

FIG. 16 is a longitudinal cross sectional view of the stand and rack of FIG. 15 on a reduced scale;

FIG. 17 is a fragmentary free body perspective view of the diagonal brace and rack attachment portion of the fifth wheel stand assembly; and

FIG. 18 is a cross sectional view taken generally along the lines 18—18 of FIG. 16.

In the broken perspective view of FIG. 1, 10 generally denotes a railway car of the flat deck variety having standard couplers 11 and 12 mounted in the usual manner at opposite ends. The railway car 10 includes a flat deck portion 13 which may be joined to downwardly extending marginal edge portions 14 and 15.

A cushion rack assembly 16 is mounted on the flat deck 13, and includes a pair of spaced fixed support mem-

bers 17 and 18 joined to the flat deck portion 13 on opposite sides of the car center line and extending substantially longitudinally continuous from one end of the car to the other. A pair of movable support members 19 and 20 are mounted in vertical load bearing relationship to the fixed members 17 and 18, and as will become apparent hereinafter, are free for longitudinal reciprocating movement between predetermined limits. Suitable means are provided for attachment of various types of containerized lading to the cushion rack arrangement 16, including collapsible fifth wheel stand assemblies 21 and 22, mounted between the movable support members 19 and 20 to accommodate highway trailers and the like. Additional means are provided for mounting containerized lading units in a manner to transmit acceleration forces to the movable support members 19 and 20. The containerized lading units are received in vertical load bearing relationship on the upwardly facing continuous support surfaces of the movable support members 19 and 20 for movement thereof relative to the fixed support members 17 and 18. The magnitude and rate of such movement may be controlled by a cushion means, such as the hydraulic cushioning arrangement indicated generally at 23.

A pair of transverse brace members 24 and 25, in engagement with opposite ends, actuate the hydraulic cushion means 23 regardless of the direction of impact, assuming of course that the magnitude of the force is sufficient to overcome the resistance of the cushion means 23. As will become apparent, other forms of cushion means can be used with the cushion rack arrangement of the present invention.

As is best seen in FIG. 1, the railway car 10 includes a box-like center sill 26, provided with suitable cross-bearers and crossties at spaced intervals to support the deck or floor sheets forming the longitudinally continuous flat deck 13. The usual wheel truck assemblies 27 and 28 are provided at opposite ends of the car 10 to support the center sill at spaced points in a well known manner.

A typical cross sectional view taken through the center or deep section of the car is illustrated in FIG. 2. The box-like center sill 26 includes spaced vertical side web portions 29 and 30 which are joined at their lower marginal edges to a bottom cover plate 31 by welding or any suitable equivalent method of fastening. The upper marginal edges of the side web portions 29 and 30 may be joined by a separate top cover plate (not shown) or as illustrated in FIG. 2 are joined by the floor sheet forming the flat deck portion 13.

Solid web cross-bearer members 32 and 33 are joined to the side web portions 29 and 30 of the center sill and are provided with the lower marginal edge rolled into laterally projecting flanges to increase the rigidity thereof. The usual side sills 33 and 34 join the cross-bearers to lend support to the flat deck 13 in the area of the wheel track portions, while side stringers 35 and 36 extend continuously along the outer edges of the cross-bearers beneath the flat deck portion 13.

In the embodiment of FIGS. 1 and 2, the fixed support members 17 and 18 are mounted on the flat deck 13, generally extending longitudinally in the area directly above the side web portions 29 and 30 to enhance the load bearing characteristics of the car. On opposite sides of each of the fixed support members 17 and 18, retainer blocks 37 and 38 are welded at spaced intervals from one end of the car to the other. Obviously, if desired, each of the retainer blocks 37 and 38 may be continuous throughout the length of the car however, in the interest of economy and minimizing the total dead weight of the car it has been found that providing retainer blocks 37 and 38 at spaced intervals in sufficient to perform the retaining function.

The upper surface of each of the retainer blocks 37 and 38 engages the underside of the movable support members 19 and 20 for supporting the load and in addition

serves to retain the same to the car by the underside of each co-operating with flange portions 39 and 40, and 41 and 42, formed on each of the movable support members 19 and 20 respectively. It is contemplated that the retainer blocks 37 and 38 may be formed of material which is less resistant to abrasion than the movable support members 19 and 20 so that as the movable support members 19 and 20 reciprocate relative to the fixed support members 17 and 18, any wear occurring will be confined to the retainer blocks 37 and 38. More simply stated, the upper load bearing surfaces of the retainer blocks 37 and 38 may be considered to be sacrificial surfaces to accommodate wear during reciprocation of the movable support members 19 and 20.

In FIGS. 1 and 2, cushioning of the rack is performed by the hydraulic cushion means indicated generally at 23. A novel form of cushion means found to be equally satisfactory when incorporated readily into the novel cushion rack design is shown in FIGS. 3 and 4. In this design, the fixed support member 17 receives a draft gear 43 of conventional construction including the usual stack of elastomeric slabs separated by metallic plate members. The draft gear 43 is mounted internally of the fixed support member 17 and contained by spaced abutment members 44 and 45 welded to the deck and fixed support member 17 respectively, and operatively engageable with one end of the draft gear 43. An identical pair of abutment blocks 46 and 47 are mounted in an identical manner at the opposite end of the draft gear to confine the same for reasons to become apparent.

A pair of transverse cross bars 48 and 49 are provided at opposite ends of the draft gear 43, extending through elongated openings at 50 and 51 provided in opposite sides of the fixed support member 17 and having the opposite ends joined directly to the movable support member 19 above the inturned flanges 39 and 40. As the movable support member 19 reciprocates relative to the fixed support member 17 in response to shock loading applied to the couplers 11 and 12, the cross bars 48 and 49 compress the draft gear 43 against the appropriate abutment blocks depending of course, on the direction of travel.

A similar draft gear arrangement is provided in the fixed support member 18, the operative association with the movable support 20 being identical. Obviously, any number of draft gears may be provided at spaced intervals along the rack assembly on the car to give any desired degree of travel and respond to forces of any desired magnitude. It is readily apparent that the use of draft gears as a cushion means provides a comparatively inexpensive substitute for the hydraulic cushion means shown in FIG. 1 where the car design permits.

Referring once again to FIG. 2, a fragmentary portion of a container is illustrated fragmentarily in phantom and identified by reference numeral 52. The container 52 is mounted on the rack so that the transverse cross-beams (not shown) normally found beneath the container floor, rest directly on the movable support members 19 and 20 to provide direct support to each cross-beam over the entire length of the container. The vertical forces generated by the static weight of the load in the container 52 is thus distributed from one end to the other between adjacent cross-beams directly to the movable support members 19 and 20 to maintain the total force per unit area at minimum. As will become apparent hereinafter, suitable means is provided to transmit horizontal or acceleration forces acting to reciprocate the container, through the rack to the cushion means 23 or the draft gear 43 depending upon which is used.

Also illustrated in FIG. 2 in phantom lines at 53 and 54 are fragmentary representations of dual wheels such as might be found on a highway trailer or the like. The inside wheel portions are spaced a slightly greater amount than the movable support members 19 and 20 in order that the latter may serve as inside wheel guides as the highway trailer is drawn into position on the car. The

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inside wheel guides eliminate the necessity of providing usual side guide portions on the car and thereby contribute to a further reduction in the total dead weight of the car. The advantages need not be stated.

A still further reduction in the total dead weight of the car may be effected through the use of a modified form of rack arrangement as exemplified in the fragmentary perspective view of FIG. 5 which also illustrates a typical cross section construction in the deep section of the car. The cushion rack arrangement of FIG. 5 includes a center sill having vertical side web portions 60 and 61 joined at their lower edges by a bottom cover plate 62. Suitable sheet-like cross-bearers 63 and 64 are provided at spaced intervals along the outer surface of the side webs 60 and 61 and mount side stringers 65 and 66 forming the downwardly projecting edges 15 and 16 as well as side sill members 67 and 68.

The side floor sheets 69 and 70 are supported by the cross-bearers 63 and 64, side sills 67 and 68, and side stringers 65 and 66, with each of the side floor sheets 69 extending from the vertically disposed webs 60 and 61 across the associated side sill to the side stringer. A top cover plate 71 is provided at the upper marginal edges of the side webs 60 and 61 to resist the usual compressive forces above the neutral axis of the box-like sill section.

The top cover plate 71 is of greater transverse dimension than the spacing between the side webs 60 and 61 providing laterally projecting flange forming portions 72 and 73. The top cover plate forms with the side webs 60 and 61 a stationary support member which slidably receives movable support members 74 and 75 which are joined together by suitable cross bracing indicated generally at 76. Each of the movable supports 74 and 75 is provided with a load receiving surface which is directly supported by the fixed support or top cover plate 71. A lower interned flange portion 78 on each of the movable support members 74 and 75 co-operates with the lateral flanges 72 and 73 to retain the rack to the top cover plate 71.

Relative movement occurring between the movable support members 74 and 75 and the top cover plate 71 is absorbed and dissipated by a suitable cushion means such as that described above. A cross bar 79 extends through elongated slots 80 and 81 in each of the side webs 60 and 61 respectively and has the ends joined to the movable support member while the central portion is engageable with an end portion 82 of a hydraulic cushion or any other suitable form of cushioning means.

The upwardly facing load supporting surface 77 on each of the movable members 74 and 75 provides continuous support over the entire length of the car for containerized and similar forms of lading. As will become apparent hereinafter, suitable means is provided to retain the lading positioned over the movable support surfaces. In the embodiment of FIG. 5, the movable support members 74 and 75 are illustrated as bearing directly upon the top cover plate 71 forming the stationary support member. Loads received at the surface 77 on each of the movable support members 74 and 75 are transmitted directly through the top cover plate to the side webs 60 and 61.

If desired, a sacrificial bearing member may be interposed between the top cover plate 71 and the movable support members 74 and 75 to provide a wear surface. The movable support members 74 and 75 in FIG. 5 also serve as an inside wheel guide means in the same fashion as the embodiment shown in FIGS. 1 and 2 and described above. In FIG. 5, however, the center sill top cover plate 71 forms the load supporting or non-movable support member which co-operates directly with the movable support members 74 and 75.

Referring to FIGS. 6-8, a shear bolster arrangement is indicated generally by reference numeral 85 and includes a box-like beam 86 having enlarged T-shaped lock-

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ing housings 87 and 88 at opposite ends. Each of the locking housings 87 and 88 includes a laterally sloped guide surface which serves to center the container transversely during loading. Longitudinal guiding is provided by triangular shaped portions 89 and 90 formed on the upper surface of the box beam 86.

The shear bolster 85 is attached to the support member 89 through suitable hold-down assemblies 91-94. The hold-down assemblies 91 and 92 draw the box beam 86 into engagement with the movable support member for reasons to become apparent. Each hold-down arrangement 91-94 illustrated in the enlarged perspective view of FIG. 7 includes a J-bolt member 95 which passes through the box beam 86 (shown in phantom) and hooks beneath a plate 97 on the movable support 19 both of which are also shown in phantom. A handle nut 96 on each J-bolt draws the box beam 86 downwardly on the movable support members. Upstanding portions on the handle nut 96 on each of the J-bolts 95 are hooked together to prevent the same from working loose once the shear bolster 85 is mounted in position.

As is more apparent in FIGS. 9, 10 and 13, the J-bolts 95 hook beneath a plate 97 welded to the associated flange 39-42 in the support members. When the handle nut 96 is drawn down tight, an annular boss 98 on the underside of the box beam 86 is positioned within an opening 99 provided in the movable support member 19. Similar openings are provided at 99' and 99'' to permit the bolster to be shifted longitudinally of the support members 19 and 20 to accommodate containerized lading of varying lengths.

The upstanding sides of the box beam 86 on the shear bolster 85 are adapted to engage the end of a container resting on the movable support members and for all practical purposes the bolster 85 supports no vertical load but merely transmits the longitudinal or horizontal forces acting on the container to the cushion through the movable support members. These forces are absorbed and dissipated by the cushion arrangement to protect the lading. The hydraulic cushion shown in FIG. 1 or the draft gear arrangement described in connection with FIGS. 3 and 4 may perform the cushioning function. It will become apparent hereinafter that other forms of cushion means are equally suitable for the rack arrangement shown in FIG. 5.

Referring once again to FIGS. 6 and 8-10, container locking arrangements are provided in each of the T-shaped locking housings 87 and 88 provided at opposite ends of the shear beam 85. The container locking arrangements include a centrally disposed rod or shaft 101 mounted within the box beam 86 and provided with suitable means to journal the same for rotation. On each end of the shaft 101 is provided a container locking assembly 102 and 103 mounted within each of the locking housings 87 and 88. A wrench receiving socket 104 and 105 is provided at opposite ends of the shaft 101 to receive a crank member 106 for manually rotating the shaft 101 for reasons to become apparent.

Inwardly of each of the sockets 104 and 105, the shaft 101 is threaded as at 107 with the threads at opposite ends being of opposite hand. A locking plate 108 mounts container locking pins 109 and 110 at opposite ends and is threadably received on the threaded portion 107 of the shaft 101 for moving the container locking pins 109 and 110 axially of the shaft 101. A similar locking plate and locking pin arrangement is provided at the opposite end of the shaft 101.

It is apparent that rotation of the shaft 101 by means of the crank 106 in the appropriate direction moves the container locking pins 109 and 110 into engagement with the usual locking apertures provided in the container corner casting. Once engaged, the pins serve to prevent the container from lifting off the movable support surfaces 19 and 20. The pins also hold the end of the container in engagement with the sides of the box beam 86 forming a part of

the shear bolster 85. For sake of economy in manufacture of the bolsters it is contemplated that they will be manufactured in the form shown and suitable for use at the center and ends of the car. Obviously, if a specially adapted end bolster is desired, the locking pins and guide surfaces on one side of the box beam 86 may be omitted.

In FIGS. 11 and 12 is shown a fragmentary enlarged cross sectional view of the railway car shown in the fragmentary perspective view in FIG. 5. In this embodiment, the shear bolster 85 co-operates with the movable support members 74 and 75 through an annular disk 98 positioned within annular openings 111 formed in each of the upwardly facing support surfaces 77. Suitable hook engaging plates 97 are provided on the movable support members 74 and 75 beneath the flange 78 to permit the J-bolt 95 to be hooked onto in order to hold the annular disk 98 positioned in the opening 111. The detailed features of the shear bolster assembly 95 shown in FIG. 11 is identical to that described in connection with FIGS. 6-10 and 13. In the design of FIG. 11, however, the fastening assemblies 92 and 93 normally found between the support members are omitted for obvious reasons.

In the FIG. 11 embodiment, cushioning may be provided through a cushion means of the form indicated generally at 112 and operatively associated with each of the support members 74 and 75. As is best seen in FIG. 12, cushion means 112 comprises an inner plate member 113 and outer plate member 114 having a block of elastomer 115 bonded thereto. The inner plate 113 is joined through bolts, welding or the like to the side web 60 or 61 and then to the support members 74 or 75.

A plurality of cushion means 112 may be provided at spaced intervals from one end of the car to the other the number being controlled by the particular design and anticipated shock loads. When the car is impacted, the container acts through the shear bolster 85 to transmit the horizontal or acceleration forces to the support members 74 and 75 which in turn move across the top cover plate 71. Since the cushion means 112 has the inner plate 113 connected to the non-movable side webs 60 and 61 on the car as the outer plate 114 moves the elastomer 115 is placed in shear. Total movement of the movable support members 74 and 75 relative to the webs 60 and 61 is limited to approximately the total shear value of the elastomer 115.

As illustrated in FIG. 14, a schematic plan view of a skelton underframe of a typical container 116 or highway trailer with the wheels removed is illustrated in a normal loaded relation to the movable support members 74 and 75. The container 116 has the usual transverse floor beams or cross beams 117 extending between side stringers or sills 118 and 119. End sills 120 and 121 complete the perimeter underframe of the container 116. Each of the cross beams 117 rests directly on the upward facing portion of the movable supports 74 and 75 thereby providing substantially uniform distribution of the load over the entire length of the container 116.

In the schematic plan view of FIG. 14, chain anchor assemblies 122 are connected to pad eyes 123 joined to the sides of the movable support members 74 and 75 and suitable pad eyes 124 on the corner castings to hold the container positioned securely to the cushion rack and to transmit acceleration forces thereto. Obviously, other forms of anchor arrangements for joining the container 116 to the cushion rack are equally suitable so long as the cross beams 117 and end sills 120 and 121 of the container 116 are permitted to rest directly on the movable support members 74 and 75.

As pointed out in connection with FIG. 1, collapsible fifth wheel support assemblies are provided as is illustrated generally at 21 and 22 in FIG. 1. The detailed constructional features of the fifth wheel stands used in each of these assemblies is better shown in FIGS. 15-18 and include a fifth wheel supporting surface 130 provided with a vertical stanchion or post 131 which is pivotally con-

nected to deck brackets 132 and 133 welded to the deck of the car. A diagonal brace 134 is provided with a rack attaching portion 135 at one end, while the opposite end of the diagonal brace 134 is pivotally joined to the vertical stanchion or post 131. An additional diagonal brace 136 is provided with a similar attaching arrangement with the two braces 134 and 136 being joined together in the area of the rack attaching portion by a transverse brace 137.

As is best seen in FIGS. 15-18, the movable support members 19 and 20 are each provided with identical attachment brackets 136 welded beneath the turned flanges 40 and 41, respectively. Each of the attachment brackets 136 is of identical construction and co-operates with the rack attaching portion 135 on the associated diagonal brace in an identical manner and therefore description of the detailed features will be limited to those on the diagonal brace 134. Bracket 136 is provided with an elongated slot 137 which slidably receives a tongue 138 extending from a plate 139 mounted at the end of the tubular brace 137. The tongue 138 acts through attachment bracket 140 to guide the diagonal braces as the stand is raised and lowered.

A retainer pin 142 is carried on the diagonal brace by means of a chain 143 or the like and when inserted through the plate 139 into the bracket 140 serves to lock the fifth wheel stand assembly in the upright position shown in FIG. 16. The retainer pin 142 may be of the type commonly known in the fastener art as a self-retaining bolt having at least one expansible ball member 144 which is movable radially outwardly after insertion of the pin in the annular opening provided in the attachment brace 140. As is more evident in the enlarged view of FIG. 18, the pin 142 is inserted and the ball member automatically extends to maintain the diagonal braces 134 and 136 securely locked to the movable support members 19 and 20.

When impacts are applied to the car, they are transmitted through the diagonal brace 134 to the support members 19 and 20 from the trailer supported on the fifth wheel stand. When the forces are of sufficient magnitude to overcome the resisting force of the cushion means, the vertical stanchion 131 pivots about the deck brackets 132 and 133 as the movable support members 19 and 20 reciprocate against the cushion means. For obvious reasons total cushion travel of the rod is limited to a range of values which permit the vertical stanchion 131 to a reasonable swing. If long travel cushioned movement of the rack is desired, for example up to forty inches, the vertical stanchion 131 is mounted on the movable supports 19 and 20 through a cross brace extending between the same.

From a consideration of the foregoing, it can be appreciated that the present invention provides an extremely flexible lading supporting arrangement which is of simplified and accordingly economical design. The rack arrangement provides continuous vertical support along the container to reduce load concentration without requiring special lading attachments. Loading of containerized lading can be accomplished by existing facilities since the car design will accommodate existing methods.

Although the foregoing cushion rack and lading attachment arrangement has been described in connection with but a few embodiments, it will become immediately obvious to those skilled in the art that departures may be made without departing from the inventive concepts embodied therein. Accordingly, any restrictions imposed on the scope of the invention are to be within the spirit and scope of the appended claims.

I claim:

1. A railway car particularly adapted for transporting lading in modular units including highway trailers, containers and the like comprising, transversely spaced side sills, a center sill of box-like construction including a pair of spaced side web portions extending longitudinally be-

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tween a pair of spaced truck assemblies, a bottom cover plate joining said spaced side web portions along lower marginal edges to hold the same in spaced relationship and resist tensile loading, a top cover plate joining said spaced side web portions at upper marginal edges, said top cover plate extending transversely beyond each of said side web portions thereby defining a longitudinally extending transversely projecting flange portion along each side of said center sill adapted to transmit loads received thereon to said vertical side web portions, flooring means disposed between said side sills and said center sill at a level below said projecting flange portions of said top cover plate, movable support means in overlying relation to at least a portion of said top cover plate, said movable support means including transversely spaced first and second load receiving members extending longitudinally of the car and being slidably mounted on said marginal flanges of said cover plate of said center sill, said movable support means each comprising a substantially U-shaped section embracing said respective flanges and including a substantially horizontal load receiving surface overlying and extending substantially continuously the length of said top cover plate of said car and adapted for engaging the underside of containers between end sill portions thereof, and means interconnecting said movable support means to said car to cushion the longitudinal movement of said movable support means as it moves relative to said car in response to impacts applied thereto.

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2. The railway car of claim 1 wherein said cushion means includes elastomer means attached along one face to said side webs between said floor lever and said projecting flange portion of said top cover plate and along the other face to said movable support means to limit the longitudinal movement therebetween to the shear value of said elastomer means.

3. The railway car of claim 1 including shear bolster means mounted on said movable support member and adapted to engage the end of a container thereby to transmit horizontal forces to said movable support members.

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