

[54] **SIDE LOADERS**

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[58] Field of Search 214/75 G, 754, 670,
214/671, 672, 673, 674, 730, 731, 390;
104/244, 246, 248

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[57] **ABSTRACT**

A side loader vehicle having a transverse recess extending across the vehicle from one open side between front and rear body portions, a load carrying mast mounted on means movable along guides at each side of the recess, a tie member e.g. a roller, rotatably mounted with respect to the mast and in rolling engagement with a surface extending along each side of the recess on the opposite side of the guide to the mast to prevent the front and rear body portions splaying longitudinally of the recess at the recess.

7 Claims, 2 Drawing Figures

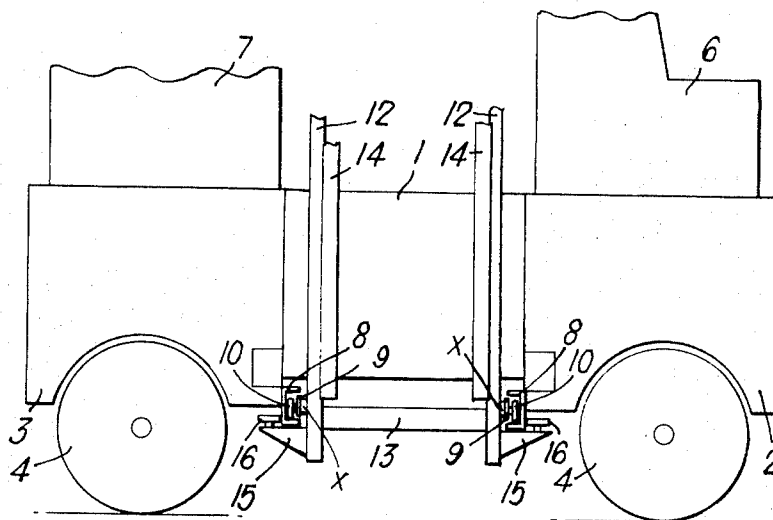


Fig. 1.

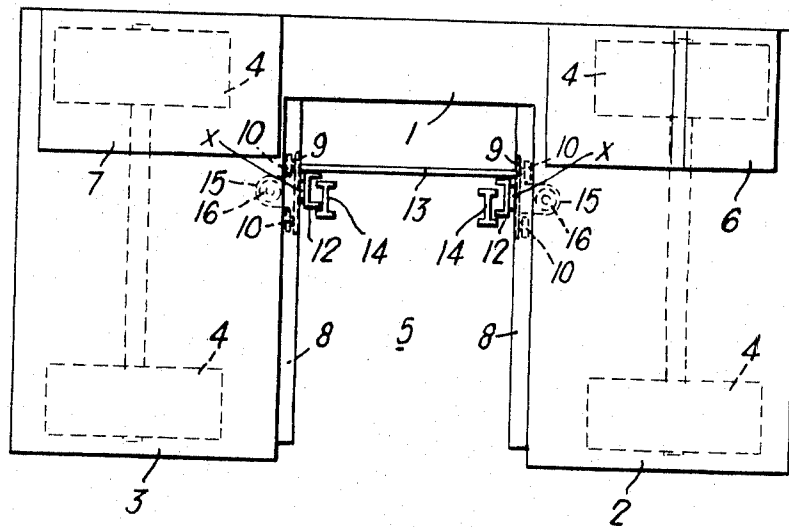
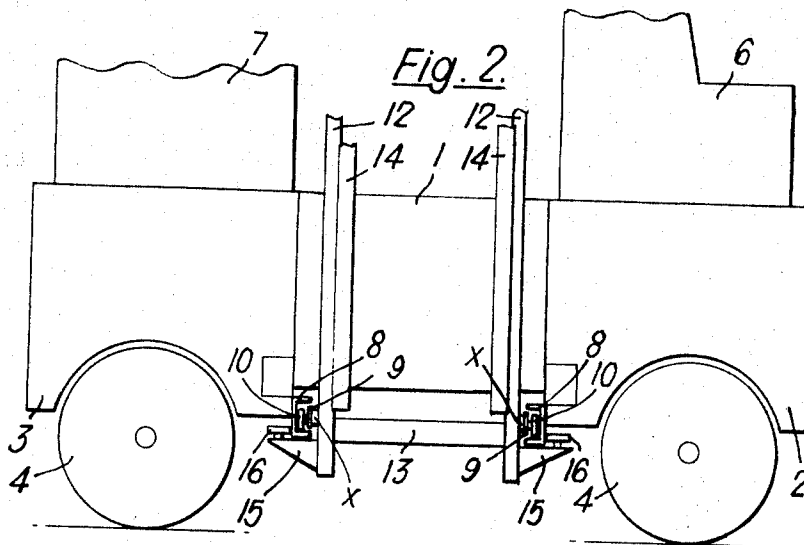


Fig. 2.



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SIDE LOADERS

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

This invention relates to side loader vehicles having a chassis formed with a longitudinal frame at one side from which extend sidewardly front and rear body parts supported on road wheels and between which is a recess extending sidewardly across the vehicle, loading means such as a fork lift mast is carried in the recess and arranged to be traversed transversely of the vehicle from an inoperative position within the recess to an operative lifting position in which the forks extend beyond the side of the truck.

When loads are lifted with the loading means fully extended severe strain is placed upon the chassis of the vehicle which tends to cause the two portions of the chassis at the outer end of the recess to splay apart forwardly and rearwardly.

The main object of the present invention is to provide a side loader vehicle in which this tendency is minimised and which will be applicable at whatever position in the recess the mast is disposed at any one time.

SUMMARY

According to the present invention a side loader vehicle of the type set forth comprises a guide extending across the vehicle along each side of the transverse recess therein, a mast supported by means movably engaging the guides, and on each side of the mast a tie member mounted with respect to the mast and moving with the mast in engagement with a surface extending across the vehicle chassis on the opposite side of the guide to the mast.

Preferably the tie member comprises a roller rotatably mounted with respect to the mast and in rolling engagement with the surface. The surface is preferably the opposite side of the guide to the mast.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a side loader vehicle shown diagrammatically; and

FIG. 2 is a diagrammatic view of the vehicle looking from the bottom of FIG. 1.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to the drawings the vehicle comprises a longitudinal frame or backbone 1 at one side from which extend sidewardly front and rear body parts 2,3 supported on road wheels 4 and between which a recess 5 extends sidewardly across the vehicle from the backbone to the other side. The forward part 2 carries the cab 6 for the driver of the vehicle including the steering mechanism in the conventional way and the part 3 carries the motor or prime mover 7 of the vehicle. Within the recess and on either side are two horizontal guides 8 of generally U-shape with their open ends facing across the recess. In each guide is a trolley 9 rolling on wheels 10 and since the two mast parts 12 carried by the trolleys and interconnected by the transverse member 13 are a rigid construction the trolleys by a traversing mechanism (not shown) can be moved along the guides and thus the mast can be traversed across the vehicle.

The bottom of the fixed mast parts 12, that is to say the parts which do not rise and fall when the load is lifted as opposed to the parts 14 which do rise and fall

with the load, are brackets 15 which extend under the guide and carry journal thereon rollers 16 which roll against the rear face 17 of the guides 8 thereby preventing the two guides and their body portions 2, 3 from spreading apart.

The rollers may however move on any surface across the vehicle adjacent the recess which may be under or above the guides providing they do resist the tendency of the body parts 2, 3 to splay apart forwardly and rearwardly of the vehicle.

It will thus be seen by means of this invention that the side spreading referred to is avoided by a simple addition to all existing fork lift side loader vehicles.

I claim:

1. A side loader vehicle having a transverse recess extending from one side between front and rear body portions, comprising a guide extending along each side of said recess, a mast formed of two uprights spaced longitudinally of the vehicle, a fork carriage riding vertically along the mast, a transverse member fixed between the lower ends of the mast uprights, said mast having means movably engaging said guides, and which support the mast in said recess a tie member on each of said mast uprights fast with said mast uprights, and a surface extending across the chassis of said vehicle at each side of said mast on the opposite side of said guide to said mast and engageable by said tie members.

2. A side loader vehicle according to claim 1, wherein each said tie member comprises a roller rotatably mounted with respect to said mast and in rolling engagement with said surface.

3. A side loader vehicle according to claim 1, wherein each said tie member comprises a bracket on the mast extending longitudinally of the vehicle beneath said guide and a roller mounted on said bracket to rotate about a substantially vertical axis, the peripheral edge of said roller running on said surface.

4. In a side loader vehicle of the type having front and rear body parts each supported by road wheels and with said body parts being spaced apart longitudinally to define a separation therebetween, frame means joining said body parts along one side of the vehicle so that said separation effects a transversely extending recess which is open at the side of the vehicle opposite to said frame means, a pair of horizontal and parallel guides within said recess, one guide being fixed to said front body part to extend inwardly from the open end of said recess toward said frame means and the other guide being fixed to said rear body part to extend inwardly from the open end of said recess toward said frame means, said guides presenting coplanar upwardly facing support surfaces at the forward and rear sides of said recess, a vertical mast assembly including a pair of uprights spaced longitudinally of the vehicle, one of said uprights being disposed at the forward side of said recess and the other being disposed at the rear side of said recess, means rigidly interconnecting said uprights adjacent their lower ends but within the confines of said recess, wheel means adjacent the lower end of each upright and engaging respective ones of said support surfaces for allowing said mast assembly to be traversed within said recess whereby loads imposed by and on said mast assembly tend to splay said body parts apart increasingly as the mast assembly is positioned nearer the open end of said recess, the improvement which comprises:

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means associated with said one guide for presenting a forwardly facing and vertical reaction surface along the forward side of said recess below said front body part;

means associated with said other guide for presenting a rearwardly facing and vertical reaction surface along the rearward side of said recess below said rear body part;

said reaction surfaces being parallel; and

load bearing means rigid with the lower end of said mast assembly for engaging said reaction surfaces to prevent splaying of said body parts as aforesaid.

5. In a side loading vehicle as defined in claim 4 wherein said reaction surfaces are formed directly on said guides.

6. In a side loading vehicle as defined in claim 5

wherein said load bearing means comprises a bracket fixed to the lower end of said one upright and projecting forwardly beneath said one guide and a bracket fixed to the lower end of said other upright and projecting rearwardly beneath said other guide, and rollers on said brackets bearing against the respective bearing surfaces.

7. In a side loading vehicle as defined in claim 4 wherein said load bearing means comprise a bracket fixed to the lower end of said one upright and projecting forwardly beneath said one guide and a bracket fixed to the lower end of said other upright and projecting rearwardly beneath said other guide, and rollers on said brackets bearing against the respective bearing surfaces.

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