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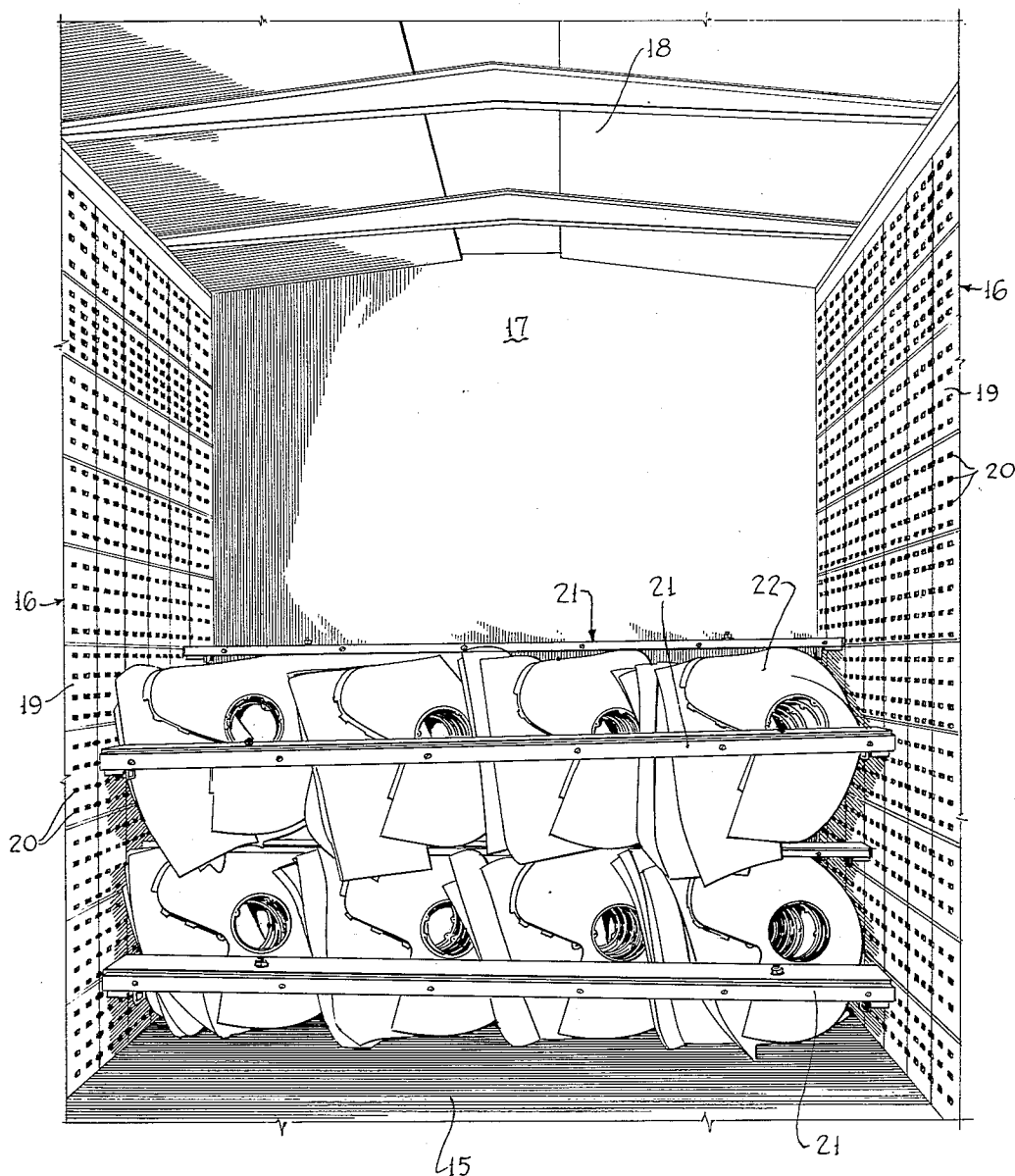
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LOADING BAR, ESPECIALLY FOR RAILWAYS CARS

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3 Sheets-Sheet 1

FIG. 1



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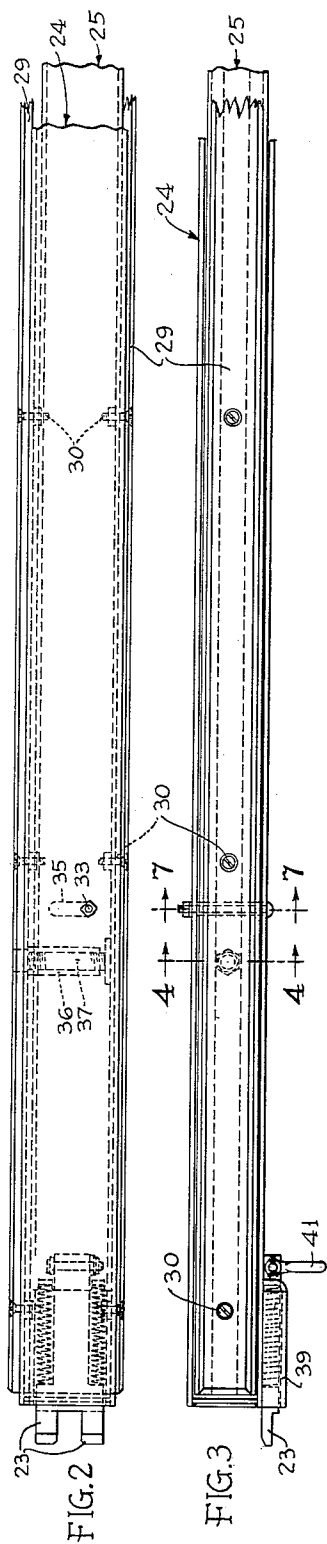
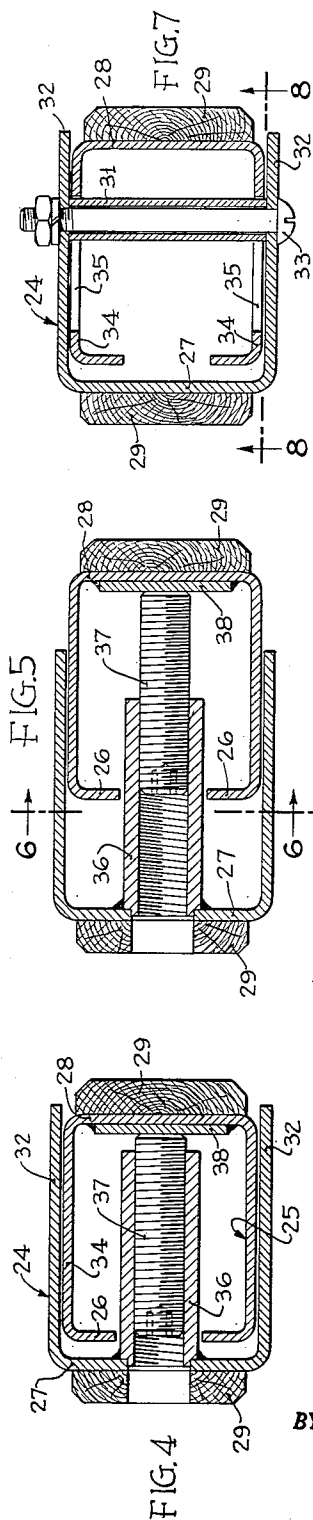
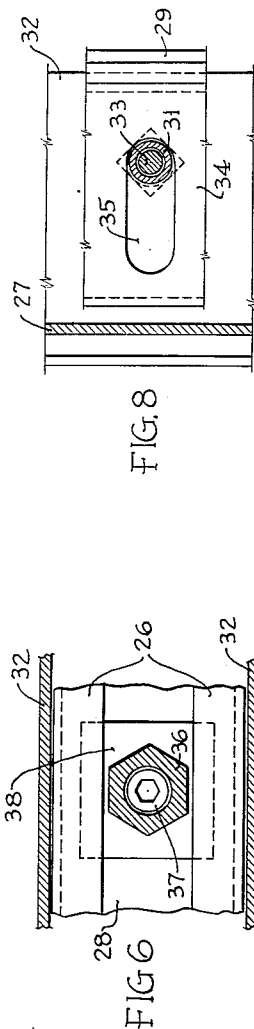
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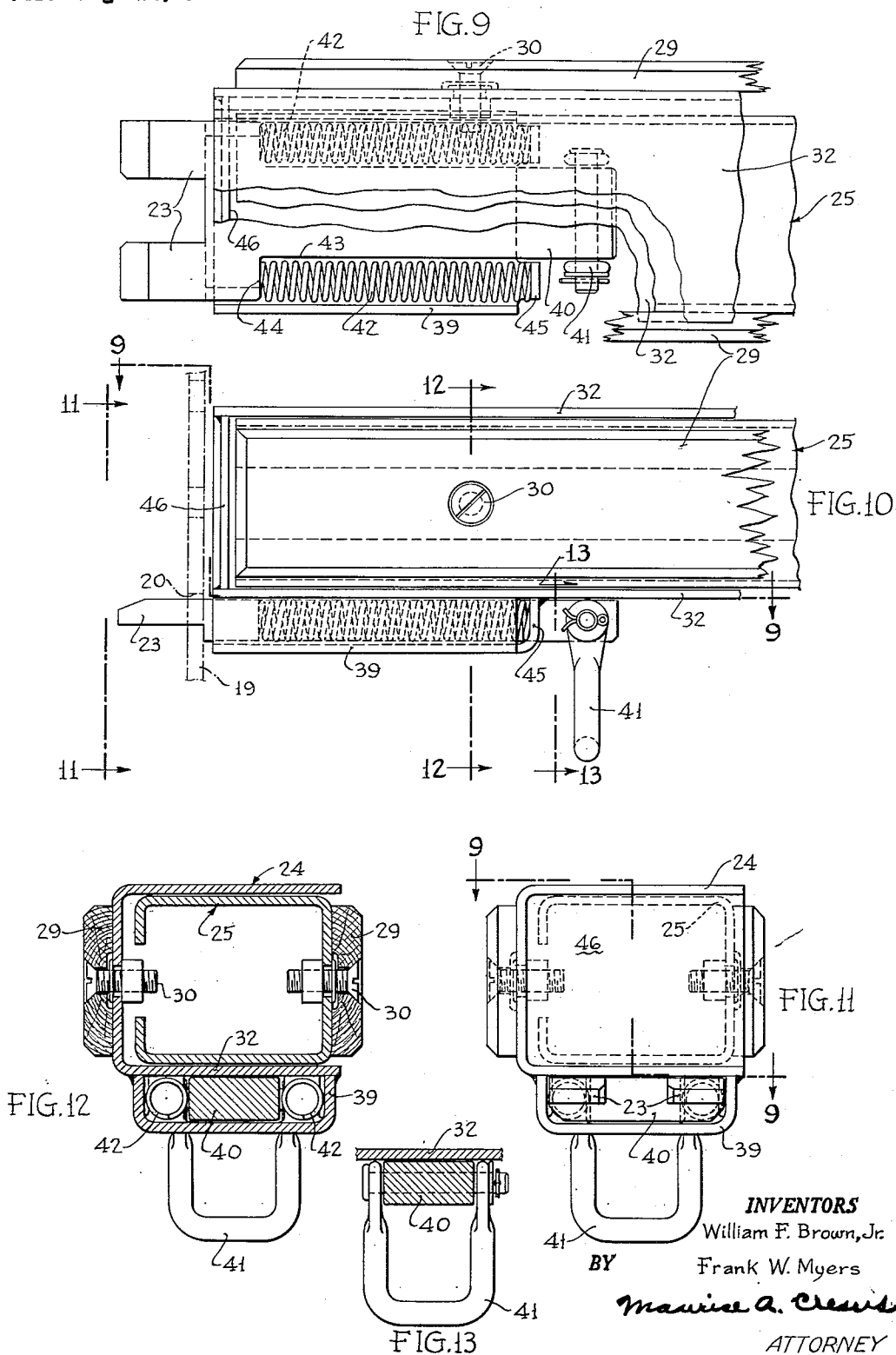
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2,747,520

LOADING BAR, ESPECIALLY FOR RAILWAY CARS

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7 Claims. (Cl. 105—369)

The invention relates to loading bars or braces of the general type widely used in railway freight cars but also usable in other vehicles and storage facilities.

Among the objects of the invention is the provision of a bar of the indicated type which is adjustable so as to bear against the load, which automatically adjusts itself to variations in the distance between the walls or supports holding the bar, and which combines relatively light weight, great rigidity, strength, ruggedness, and durability.

The new bar is formed of two individual sections transversely adjustable relative to each other. The sections are formed of a high-strength lightweight alloy such as Duralumin, and the one telescopically fits into the other. The prongs entering into holes or recesses of the walls are spring-biased on at least one end of the bar.

The above briefly outlined and other objects, advantages, and features of the invention will be more easily and fully understood from the embodiment illustrated in the attached drawing and from the following description thereof.

In the drawing:

Fig. 1 is a fragmentary inside perspective of a railway freight car equipped with several of the new bars holding automobile fenders in place;

Fig. 2 is a partial plan view on a larger scale of one of the bars;

Fig. 3 is a fragmentary elevation of the bar shown in Fig. 2;

Fig. 4 is a section, on a still larger scale, along line 4—4 of Fig. 3;

Fig. 5 is a section similar to Fig. 4 showing the parts of the bar in a different relative adjustment;

Fig. 6 is a fragmentary section along line 6—6 of Fig. 5;

Fig. 7 is a section along line 7—7 of Fig. 3 on the scale of Fig. 4;

Fig. 8 is a fragmentary section along line 8—8 of Fig. 7;

Figs. 9 and 10 are fragmentary views, on the scale of Figs. 4 to 8, of the lefthand ends of the bar shown in Figs. 2 and 3, respectively, certain parts being broken away in Fig. 9 approximately along lines 9—9 of Figs. 10 and 11;

Fig. 11 is an end elevation of the bar viewed in the direction of the arrows 11—11 of Fig. 10;

Fig. 12 is a section along line 12—12 of Fig. 10; and

Fig. 13 is a fragmentary section and view, the section being taken along line 13—13 of Fig. 10.

The railway freight car illustrated in Fig. 1 comprises floor 15, side walls 16, end wall 17, and roof 18. Secured within the car to its side walls 16 are metal plates 19 provided with rows of holes or perforations 20. Such plates are standard equipment in many freight cars and serve for holding loading bars which enter the perforations 20 by correspondingly shaped prongs. A number of loading bars 21 are shown as they hold in place and support automobile fenders 22 while being held themselves

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by their end prongs entering some of the perforations 20. The prongs 23, shown in Figs. 2, 3, 9, 10 and 11, will be described later on in greater detail.

Bar 21 comprises an outer U-section 24 telescopically receiving an inner hollow-section 25. Section 25 may likewise be of U-section but is preferably additionally reinforced by intumed flanges 26. Secured to the bottom walls 27, 28, respectively, of the sections 24, 25 are strips 29 of wood by means of screws or bolts 30 (Figs. 2, 3 and 9 to 12). These strips 29 present surfaces for engagement with the load, are somewhat softer than the metal bar proper, and permit tacking-on of cover sheets, laths, etc.

Sleeves 31 are inserted at certain intervals between the side walls 32 of outer member 24, and the latter are pressed against the sleeves by bolts and nuts, the bolts 33 extending through holes in walls 32 and through the interior of sleeves 31. At the locations of sleeves 31, the side walls 34 of inner section 25 are provided with transverse slots 35 for permitting limited relative inward and outward movement of sections 24 and 25 and for guiding the two sections relative to each other.

Transverse sleeves 36 are secured at right angles to bottom wall 27 of section 24, in the interior of the latter at certain intervals along the length of the bar. These sleeves are interiorly screw-threaded and project through the space between flanges 26 of section 25 into the interior of the latter. A set screw 37 is screw-threaded in each sleeve 36 and has its one end accessible for a wrench through registering openings in wall 27 and wood lining 29. The other end of screw 37 engages the inner surface of bottom wall 28 of member 25 which may be locally reinforced by a welded-on plate 38.

Secured to the outside of one of the side walls 32 of outer member 24 at each end of the latter is a casing 39, slidably receiving and guiding a plate 40 provided at one end with the aforesaid prongs 23, while its other end has journaled to it a handle 41. A pair of springs 42 is located in housing 39 and in recesses 43 of plate 40. One end of each of these springs presses against an offset 44 near the outer end of plate 40 and the other end against an ear 45 on housing 39. Member 24 is reinforced and closed at each end by a transverse plate interiorly welded to walls 27 and 32.

Springs 42 endeavor to maintain prongs 23 in the outwardly projecting position shown in Figs. 2, 3, 9, and 10, thereby holding them in engagement with plate 19 and holes 20 therein. Insertion or removal of the bars can easily be accomplished by retracting prongs 23 against the action of spring 42 by means of handle 41. Evidently the prongs, due to being spring biased, will accommodate variations of the spacing between opposite plates 19, as may be due to permanent deformation of the car walls or to temporary deformation occasioned by uneven loading or by twisting of the car while in motion.

After a bar has been placed as closely against load 22 as the nearest holes 20 in plates 19 permit, it can be brought into firm contact with the load by moving inner bar member 25 by means of bolts 37. Evidently the bars should be arranged so that inner members 25 face the load.

The new adjustable bar is useful for lateral retaining of the load as well as for holding it from the top. Both arrangements are illustrated in Fig. 1.

The invention is not restricted to the one illustrated embodiment but is susceptible to modifications and adaptations which will easily occur to those skilled in the art.

What is claimed is:

1. Loading bar for freight cars and the like mainly composed of two elongated coextensive members, a first member and a second member, and means at both ends of said first member adapted for engaging supporting structures on opposite walls of a freight car or the like; said first

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member supporting said second member and said means adjustably in transverse and longitudinal direction, respectively, of said members; thereby permitting adjustment of said second member to the location of freight to be retained and of said means to variations in the distance between supporting structures.

2. Loading bar for railway cars and the like, mainly composed of two elongated coextensive members, a first member and a second member; said first member being provided at both ends with means for anchoring its ends in supporting structures, further means interposed between said first and second members for relatively moving said second member away from said first member.

3. Loading bar for railway cars and the like, mainly composed of two coextensive members, a first member and a second member, said first member being provided with means for anchoring its ends in supporting structures, said first member being formed by a U-section, said second member being telescopically received between the side walls of said first member, and means within said first member interposed between said first and second members for relatively moving said second member further out of said first member.

4. Loading bar for railway cars and the like, mainly composed of two coextensive members, a first member and a second member, said first member being provided with means for anchoring its ends in supporting structures, said two members being hollow U-sections having their open sides directed toward each other, said second member being telescopically received between the side walls of said first member, and means in the interior and between the bottom walls of and within said members for relatively moving said second member further out of said first member.

5. Loading bar according to claim 4, having the side walls of the second member provided with flanges directed toward each other, said flanges leaving an open space between them for the passage of said means.

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6. Loading bar for freight cars and the like comprising: two elongated coextensive members, a first member and a second member, and means at the ends of said first member adapted for engaging supporting structures on walls of a freight car or the like; said first member supporting said second member adjustably in transverse direction of said members, interiorly screw-threaded sleeves and screw-threaded bolts within said sleeves engaging respectively said outer and inner members at intervals along the length thereof for transversely adjusting said two members relative to each other, thereby permitting adjustment of said second member to the location of freight to be retained by the bar.

7. Loading bar for freight cars and the like comprising: a first member and a second member, both coextensive with the length of the bar, said first member being provided with means for anchoring its ends in supporting structures such as reticulated plates secured to the side walls of a freight car, said first member being a U-section slidably receiving between its side walls said second member, transverse spacers bracing at certain intervals the side walls of said first member, transverse slots formed in said second member for the passage therethrough of said spacers and forming with said spacers means for guiding said two members relative to each other transversely to their longitudinal extent, and means located at intervals along the length of said members for moving the two members away from each other.

References Cited in the file of this patent

UNITED STATES PATENTS

Re. 20,811	Thomas	July 26, 1938
856,159	Keller	June 4, 1907
2,425,875	Hermann	Aug. 19, 1947
2,476,362	Fahland	July 19, 1949