

Dec. 30, 1941.

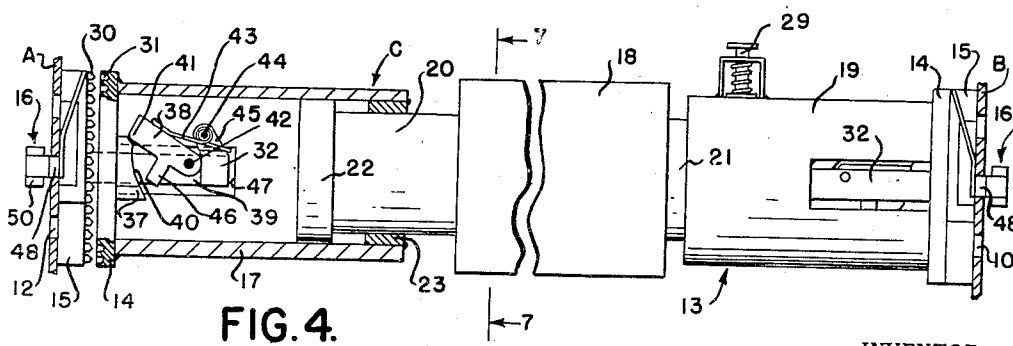
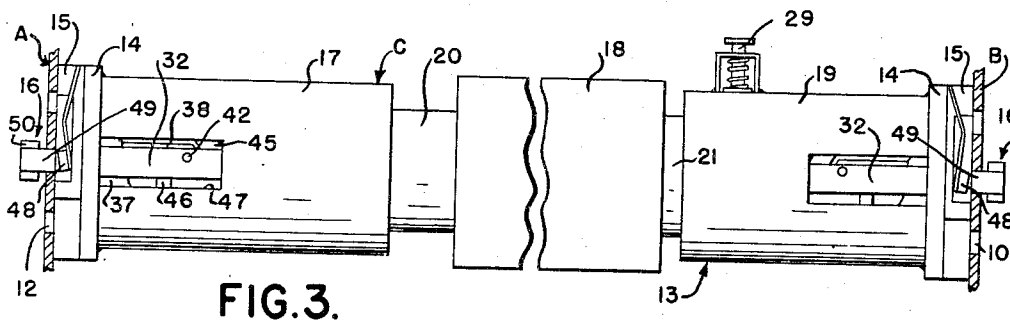
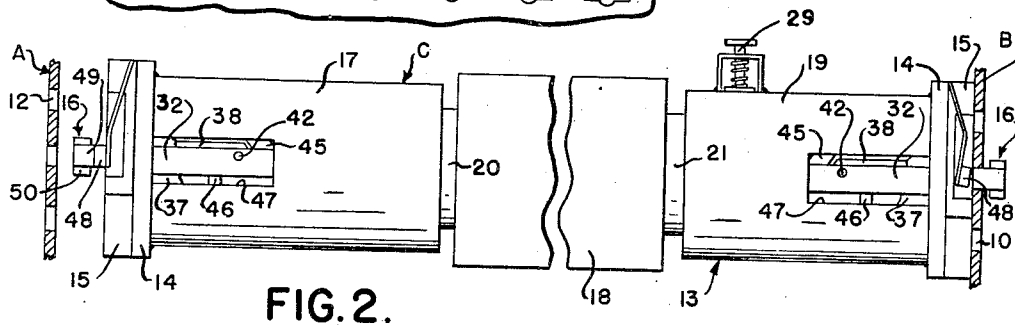
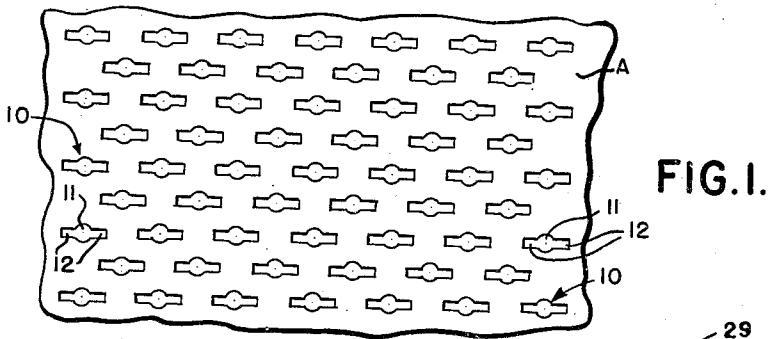
S. E. HEBERT

2,268,394

INTERIOR FITTING FOR FREIGHT CARS

Filed March 3, 1941

3 Sheets-Sheet 1



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Dec. 30, 1941.

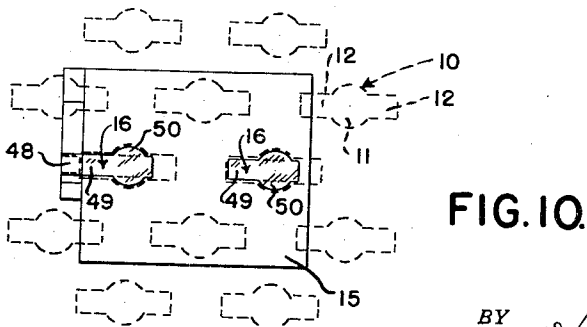
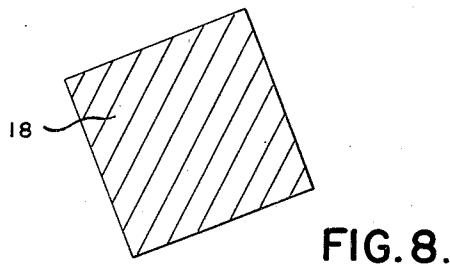
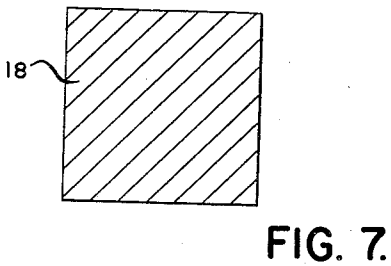
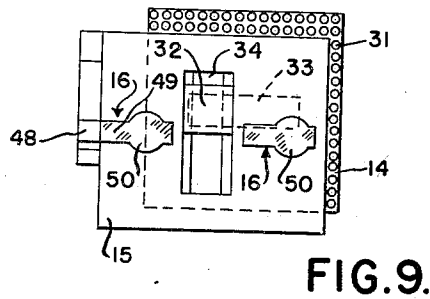
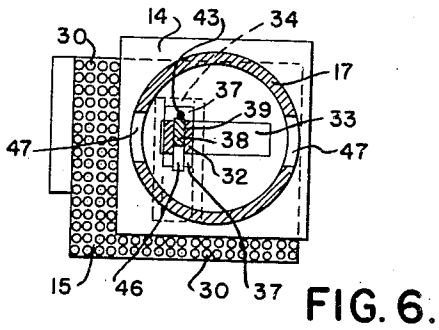
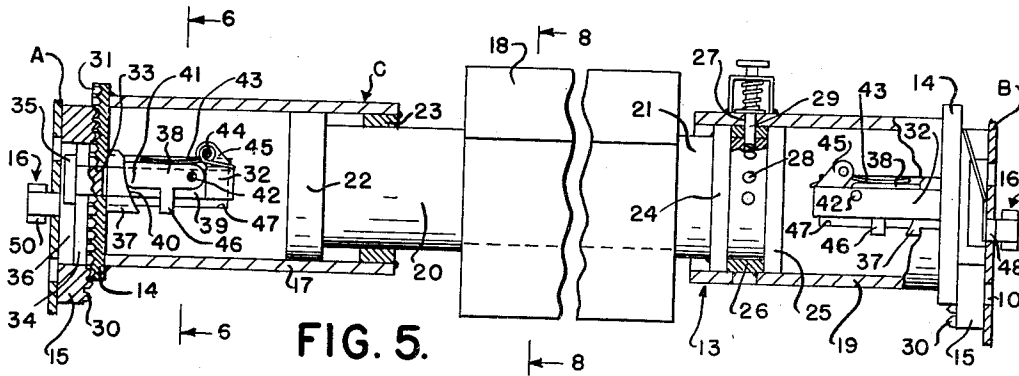
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INTERIOR FITTING FOR FREIGHT CARS

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3 Sheets-Sheet 2



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2,268,394

INTERIOR FITTING FOR FREIGHT CARS

Filed March 3, 1941

3 Sheets-Sheet 3

FIG. II.

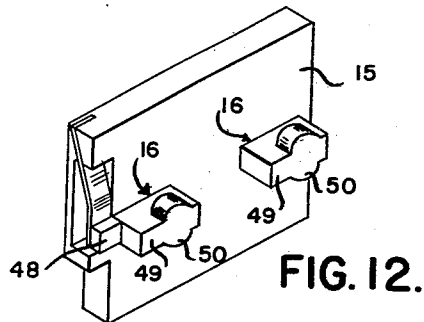
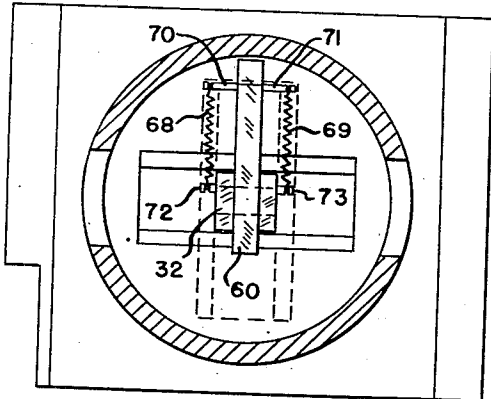
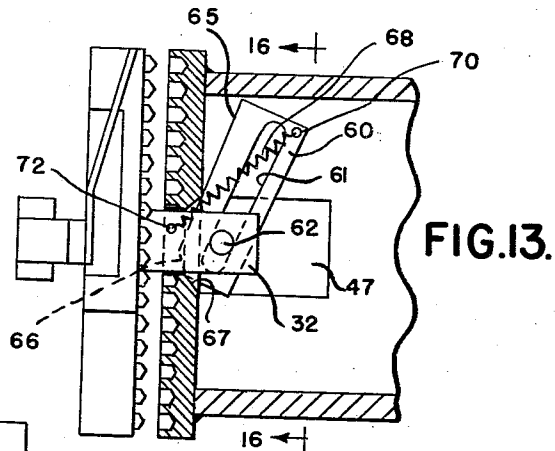
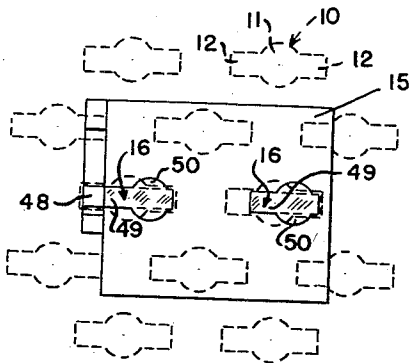


FIG. 16.

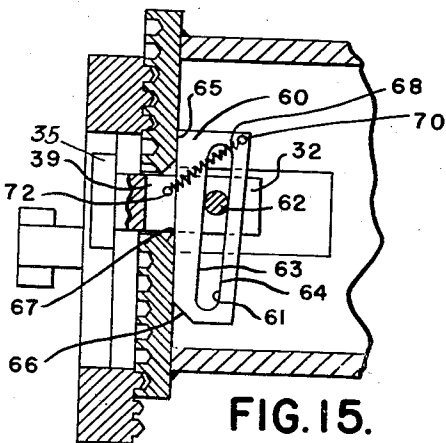


FIG. 15.

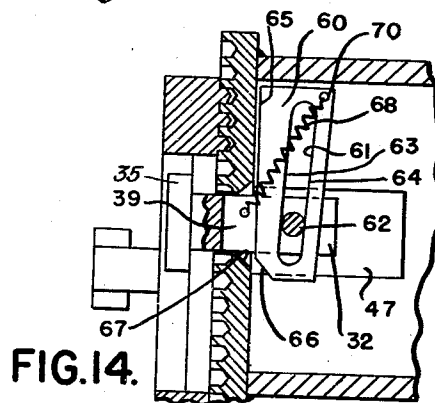


FIG. 14.

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UNITED STATES PATENT OFFICE

2,268,394

INTERIOR FITTING FOR FREIGHT CARS

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Application March 3, 1941, Serial No. 381,575

22 Claims. (Cl. 105—369)

This invention relates generally to interior fittings for freight cars and refers more particularly to adjustable crossbars designed for use in connection with the upright walls of box cars for supporting or anchoring freight therein.

Heretofore the side walls of box cars have been perforated for the reception of latch elements of supporting or partitioning members, but the construction and arrangement of the latch elements and perforations has been such that the members could not be adjusted to fit various contours of freight, and in some instances could not even with the aid of shims be adjusted against or close enough to the freight to take up play or vibrations therebetween or to take up any slack caused by wear in the perforations and latch elements mentioned. It was also found that the side walls containing the perforations had a tendency to bulge and/or weave when the box cars traveled around curves, and this sometimes caused withdrawal of the latch elements from the perforations. As a result, such structures were objectionable and unsatisfactory.

In the present instance the crossbars are constructed so that (1) a finer or closer adjustment of the bars relative to the freight or load may be obtained, (2) all play, slack and vibrations between the bars and side walls of the box car may be taken up automatically, (3) the bars may be adjusted to fit various contours of freight, (4) the desired adjustment of the bars may be obtained without the use of shims, (5) the bars will adjust themselves automatically to compensate for variations in the width between side walls of the box cars, and (6) the connections between the bars and side plates of the box cars will be effectively maintained without danger of accidental withdrawal or separation of the bars from the side walls of the box car.

In the accompanying drawings:

Figure 1 is a fragmentary side elevation of one of the perforate upright walls of a box car;

Figure 2 is a vertical cross sectional view through the upright walls of a box car and showing the first step of applying a crossbar embodying my invention to the side walls;

Figure 3 is a view similar to Figure 2 and showing the second step of applying the crossbar to the upright walls;

Figure 4 is a view similar to Figures 2 and 3 before the proper adjustment between the end plates has been made and before the spring pressed dogs carried by the latch bolts are in locked position;

Figure 5 is a view similar to Figure 4 showing the crossbar when fully locked to the upright walls of the box car;

Figure 6 is a sectional view taken substantially on the line 6—6 of Figure 5;

Figure 7 is a sectional view taken substantially on the line 7—7 of Figure 4;

Figure 8 is a sectional view taken substantially on the line 8—8 of Figure 5;

5 Figure 9 is an end view of the crossbar;

Figure 10 is a diagrammatic view showing the application of the attaching members 16 to the perforations 10 in the upright wall B of the box car, upon insertion of the attaching members 10 into the perforations and before the attaching members are slid lengthwise of the perforations;

Figure 11 is a view similar to Figure 10 showing the arrangement of parts after the attaching members 16 have been slid lengthwise of the perforations and after the spring pressed blocks 48 have snapped into locking position;

Figure 12 is a perspective view of the end plate 15.

Figures 13, 14 and 15 are fragmentary vertical sectional views through a slight modification;

Figure 16 is a sectional view taken on line 16—16 of Figure 13.

Referring now to the drawings, A and B, respectively, are upright walls of a box car, and C is a crossbar embodying my invention.

As shown, the upright walls A and B are similar in configuration and each has a plurality of perforations or openings 10 therein. Such walls A and B are preferably formed of heavy gauge sheet metal and may be supported in opposed spaced relation in any suitable manner. As shown, the perforations 10 are spaced apart in horizontal rows, with the perforations of adjacent rows staggered relative to each other. Each perforation is of double key-hole-shaped type and has a circular center portion 11 and aligned end portions 12 at diametrically opposite sides of the circular center portion.

The crossbar C extends between and is terminally connected to the upright walls A and B of the box car. Preferably the crossbar is formed of relatively heavy metal stock and has a sectional body 13, end plates 14 and 15, respectively, and attaching members 16. In the present instance the body 13 comprises three sections 17, 18 and 19, respectively, and extends between the end plates 14. As shown, the end sections 17 and 19 are tubular in form, while the central or intermediate section 18 may be any suitable construction and configuration and has cylindrical end portions 20 and 21, respectively, extending within adjacent ends of the tubular sections 17 and 19. In the present instance the central section 18 is mounted to turn in the end sections 17 and 19 but is slidable within the end section 17 only. For this purpose there is a collar 22 rigid with the cylindrical end portion 20 of the central section 18 and engageable with an annulus 23 within and rigid with the end section 17 at its inner end, and two collars 24 and 25, respectively, rigid

with the cylindrical end portion 21 of the central section 18 and disposed upon opposite sides of an annulus 26 within and rigid with the end section 19. Preferably the annulus 26 and cylindrical end portion 21 of the central section 18 have registering holes 27 and 28 therein for receiving a spring pressed plunger 29 for holding the central section 18 in adjusted position relative to the end sections 17 and 19.

The end plates 14 and 15 are disposed at the outer ends of the end sections 17 and 19 of the bar and are adapted to cooperate with each other to hold the bar in adjusted vertical or horizontal positions relative to the perforated upright walls A and B of the box car. As shown, the inner plates 14 extend across and are rigid with the outer ends of the end sections 17 and 19, while the outer plates 15 are adjustable relative to the inner plates 14 and carry on their outer sides two laterally spaced attaching members 16 which are preferably in the form of headed lugs that are engageable with the perforations 10 in the upright walls A and B. As shown, the inner face of the outer plate 15 is provided throughout substantially its entire area with spaced pointed teeth 30 that are engageable with corresponding teeth 31 in the outer face of the inner plate 14, the arrangement being such that the teeth 30 of the outer plate 15 are engageable with the opposed sockets 31 in the inner plate 14 according to the adjustment vertically and horizontally that is made between said plates.

For coupling the outer and inner plates together so that the teeth 30 will be held in the proper sockets 31 according to the adjustment that is made, there are bolts 32 that extend through horizontally elongated slots 33 in the inner plates 14 and through vertically elongated slots 34 in the outer plates 15. The heads 35 of the bolts 32 are received in recesses 36 in the outer sides of the outer plates 15 and cooperate with cam blocks 37 and spring pressed dogs 38 upon the inner sides of the inner plates 14 to hold the plates 14 and 15 together. As shown, the cam blocks 37 are I-shape in cross section and slidably engage vertical slots 39 in the bolts 32. The cam faces 40 of said blocks curve downwardly and inwardly and are adapted to be engaged by the rounded free ends 41 of the spring pressed dogs 38. Such dogs 38 are movable vertically in the slots 39 about pivot pins 42 and are urged downwardly by springs 43 anchored at 44 upon lugs 45 rigid with the bolts 32. Projecting downwardly from the dogs 38 are lugs 46 which may be engaged by a suitable tool (not shown) that may be inserted through either of the elongated slots 47 at diametrically opposite sides of the end section 17 of the bar to effect a release of the dogs 38 from the cam blocks 37.

To prevent accidental withdrawal of the attaching members 16 from perforations 10 in the upright walls A and B, the slots 10 are made long enough to permit the attaching members 16 to slide lengthwise of the perforations and to receive spring pressed blocks 48 carried by the outer plates 15 adjacent to one of the attaching members. Thus, when the shanks 49 of the attaching members have been moved lengthwise of the perforations 10 from the circular central portion 11 to one of the elongated end portions 12 thereof after the heads 50 of the attaching members have been inserted through said central portions 11 of the perforations, the spring pressed blocks 48 will snap into the other end portions 12 of said perforations and thereby pre-

clude the heads 50 of the attaching members from accidentally sliding back into registration with and withdrawing from the circular central portions 11 of the perforations.

Thus, from the foregoing it will be apparent that the crossbar C is effectively locked by the headed attaching members or lugs 16 and spring pressed blocks 48 to the upright plates A and B of the box car; that the adjustment between the plates 14 and 15 is much finer than that afforded by the spacing of the perforations 10 alone and thus permits the body 13 of the crossbar to be positioned closer to the freight or point desired within the box car; that the rotary adjustment of the central section 18 relative to the end sections 17 and 19 of the body permits the central section 18 to be turned to the proper angle to fit various contours of freight; that the plunger 29 will hold the central section 18 in adjusted position relative to the end sections 17 and 19; that the bolts 32 and spring pressed dogs 38 will effectively hold the plates 14 and 15 in adjusted position; that the spring pressed dogs 38 will automatically take up any slack or play between the plates 14 and 15; and that the telescoping arrangement of the center section 18 with the end section 17 of the bar will compensate for variations in the distance between the upright walls A and B of the box car. Such telescoping arrangement will also compensate automatically for variations due to bulging or weaving action thereof while the box car is in motion, especially on curves. For example, the greater the vibration of the box car, the more the dogs 38 will be tightened against the cam blocks 37 to cause the plates 14 and 15 to be clamped tightly together.

In use, any number of crossbars such as the one described herein may be employed between the upright walls A and B of the box car and may be used either as supporting members or as anchorage or tiebars for the freight. Initially the headed attaching members 16 are inserted in the perforations 10 in the upright walls A and B and are then slid lengthwise of said perforations to permit the spring pressed blocks 48 to enter the perforations and retain the attaching members therein. Then the adjustment between the plates 14 and 15 is made by moving the body 13 of the bar relative to the outer plates 15. The horizontal and vertical slots 33 and 34, respectively, in the inner and outer plates 14 and 15 and the construction and arrangement of the teeth 30 and sockets 31 provide a very fine adjustment of the body portion 13 of the bar relative to the freight. The dogs 38 and bolts 32 will automatically lock the plate 14 in adjusted position. After the adjustment between the plates 14 and 15 is made, the center section 18 of the body may be turned as illustrated in Figure 8 to fit more closely the contour of the freight. If desired, partition members (not shown) may be carried by or connected to the crossbars if it is desired to divide the box car into compartments or chambers, or to accommodate freight of different kinds, or for any other purpose. Likewise, the crossbars may be used as braces or as supports or as anchorage means for freight, as desired.

In Figures 13 to 16, inclusive, I have illustrated a slight modification wherein a spring actuated slotted bar 60, instead of a spring pressed dog 38 and cam block 37, is mounted on the bolt 32 to hold the end plates 14 and 15 together. As shown, the bar 60 is substantially rectangular in configuration and is located in the longitudinally

extending vertical slot 39 in the bolt 32. Such bar 60 has a longitudinally extending slot 61 therein receiving a pin 62 extending transversely of the bolt 32. The slot 61 has substantially parallel side walls 63 and 64 and is inclined relative to the outer straight edge 65 of the bar. The lower outer corner of the bar is cut away to provide an inclined surface 66 that is engageable with a downwardly and inwardly inclined surface 67 at the lower inner edge of the bolt opening 33 in the inner plate 14. Coil springs 68 and 69 are located upon opposite sides of the bar 60 and are terminally connected to pins or lugs 70, 71, 72 and 73, respectively, projecting laterally from said bar 60 and bolt 32. Thus, when the plate 14 is adjusted relative to the plate 15 so that the proper sockets 31 in the plate 14 will receive the proper teeth 30 of the plate 15, the bar 60 will be moved automatically by the springs 68 and 69 from the inclined position illustrated in Figure 13 to the upright position illustrated in Figure 14 and thence downwardly to the position illustrated in Figure 15 to hold the plates 14 and 15 together. In this connection it will be noted that the straight edge 65 of the bar 60 is engageable with the inner flat surface of the end plate 14 and that the inclined arrangement of the slot 61 relative to said edge 65 is such that a cam action will be set up to not only hold the plates 14 and 15 together but also to take up automatically any slack or play between said plates. For example, the greater the vibration of the box car, the more the bar 60 will be urged downwardly on the pin 62 by the springs 68 and 69 to tighten the engagement between the plates.

What I claim as my invention is:

1. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar having a central section and end sections sleeved upon opposite ends of said central section, the central section being mounted to turn relative to both end sections and slidable longitudinally of at least one of said end sections, plates rigid with the end sections at their outer ends, and plates coupled to the plates just mentioned and having projections detachably engaging selected perforations in the wall members aforesaid, the couplings between the first and last mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted horizontally and vertically relative to the last mentioned plates and upright members while the projections aforesaid are in engagement with said selected perforations.

2. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, comprising a substantially horizontal crossbar provided at each end thereof with inner and outer cooperating transversely extending upright plates, the outer plates being provided on their outer sides with outward projections detachably engaging selected perforations in said wall members and provided upon their inner sides with inwardly projecting teeth, and the inner plates being rigid with the ends of the crossbar and provided in their outer sides with sockets for the reception

of the teeth on the outer plates, and couplings between the inner and outer plates normally holding the teeth in said sockets, said couplings being adjustable to permit the inner plates and crossbar as a unit to be adjusted horizontally and vertically relative to the outer plates.

3. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a substantially horizontal crossbar provided at each end thereof with inner and outer cooperating plates, the outer plates being provided on their outer sides with outward projections detachably engaging selected perforations in said wall members, and the inner plates being rigid with the ends of the crossbar and adjustably coupled in surface-to-surface relation to the outer plates, the coupling between the inner and outer plates permitting the inner plates and crossbar as a unit to be adjusted horizontally and vertically relative to the outer plates.

4. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a substantially horizontal crossbar provided at each end thereof with inner and outer cooperating plates, the outer plates being provided on their outer sides with outward projections detachably engaging selected perforations in said wall members, and the inner plates being rigid with the ends of the crossbar and adjustably coupled in surface-to-surface relation to the outer plates, the coupling between the inner and outer plates including bolt and slot connections between said outer and inner plates permitting the inner plates and crossbar as a unit to be adjusted horizontally and vertically relative to the outer plates.

5. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a substantially horizontal crossbar provided at each end thereof with inner and outer cooperating plates, the outer plates being provided on their outer sides with outward projections detachably engaging selected perforations in said wall members, and the inner plates being rigid with the ends of the crossbar and adjustably coupled in surface-to-surface relation to the outer plates, the coupling between the inner and outer plates including bolt and slot connections between said outer and inner plates permitting the inner plates and crossbar as a unit to be adjusted horizontally and vertically relative to the outer plates, and means cooperating with said bolt and slot connections for holding the inner plates and crossbar in adjusted position relative to the outer plates.

6. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar, plates rigid with said crossbar at opposite ends thereof, one plate at each end, and plates adjustably coupled to the plates just mentioned and having projections detachably engaging selected perforations

in said wall members, the couplings between the first and last mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted horizontally and vertically relative to the last mentioned plates and upright members while the projections are in engagement with the selected perforations and including means operable automatically when subjected to vibration for taking up play between the first and last mentioned plates after an adjustment therebetween has been made.

7. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar provided at each end thereof with inner and outer plates normally disposed in opposed substantially parallel relation to each other, the inner plates being rigid with the ends of said crossbar, the outer plates being separate from the inner plates and having outward projections detachably engaging selected perforations in said wall members, the crossbar having relatively movable sections, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of one section of the crossbar relative to another, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made.

8. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar having a center section and end sections sleeved on opposite ends of the center section, inner and outer plates at each end of the crossbar disposed in opposed substantially parallel relation to each other, the inner plates being rigid with the end sections, the outer plates being separate from the inner plates and having projections detachably engaging selected perforations in the wall members, said center section being rotatable relative to both end sections, one of said end sections being slidable lengthwise of the center section, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of the slidable end section of the crossbar relative to the center section thereof, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made.

9. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar extending between said wall members, and inner and outer plates at each end of said crossbar disposed in opposed substantially parallel relation to each other, the inner plates being rigid with the crossbar, the outer plates being separate from the inner plates and having outward projections detachably engaging selected perforations in said wall members, the crossbar having relatively movable sections, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of one section of the crossbar relative to another, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including bolts extending through crossed slots respectively in said opposed plates, the heads of said bolts being upon the outer sides of the outer plates, and spring actuated cam means carried by said bolts on the inner sides of the inner plates and operable to hold the mating portions of said plates in engagement with each other after the adjustment aforesaid is made and to take up play between said inner and outer plates.

10. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar extending between said wall members, and inner and outer plates at each end of said crossbar disposed in opposed substantially parallel relation to each other, the inner plates being rigid with the crossbar, the outer plates being separate from the inner plates and having outward projections detachably engaging selected perforations in said wall members, the crossbar having relatively movable sections, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of one section of the crossbar relative to another, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including bolts extending through crossed slots respectively in said opposed plates, the heads of said bolts being upon the outer sides of the outer plates, and cam means carried by said bolts upon the inner sides of the inner plates and operable after the adjustment aforesaid is made to hold the mating portions of said plates in engagement with each other and to take up play between said inner and outer plates and between the projections

on the outer plates and the upright wall members.

11. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar extending between said wall members, inner and outer plates at each end of said crossbar disposed in opposed substantially parallel relation to each other, the inner plates being rigid with the crossbar, the outer plates being separate from the inner plates and having outward projections detachably engaging selected perforations in said wall members, the crossbar having relatively movable sections, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of one section of the crossbar relative to another, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including elongated members extending through crossed slots respectively in said opposed plates, said elongated members having enlargements upon the outer sides of the outer plates, and means carried by said elongated members upon the inner sides of the inner plates and operable after the adjustment aforesaid is made to hold the mating portions of said plates in engagement with each other.

12. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar having a central section and end sections sleeved upon opposite ends of said central section, the central section being mounted to turn relative to both end sections, one of said end sections being slidable lengthwise of the center section, plates rigid with the end sections at their outer ends, and plates separate from but disposed in opposed substantially parallel relation to the first mentioned plates, the second mentioned plates having projections detachably engaging selected perforations in the wall members aforesaid, the opposed surfaces of the first and second mentioned plates having mating portions adapted to be separated from each other upon movement of the slidable end section relative to the center section, and couplings between the first and second mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the second mentioned plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including bolts extending through crossed slots respectively in said opposed plates, the heads of said bolts being upon the outer sides of the second mentioned plates, and spring actuated cam means connected to said bolts on the inner sides of the first men-

tioned plates and operable after the adjustment aforesaid is made to hold the mating portions of said plates in engagement with each other and to take up play between said first and second mentioned plates.

13. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar having a central section and end sections sleeved upon opposite ends of said central section, the central section being mounted to turn relative to both end sections, one of said end sections being slidable lengthwise of the center section, plates rigid with the end sections at their outer ends, plates separate from but disposed in opposed substantially parallel relation to the first mentioned plates, the second mentioned plates having outward projections detachably engaging selected perforations in the wall members aforesaid, the opposed surfaces of said first and second mentioned plates having mating portions adapted to be separated from each other upon movement of the slidable end section relative to the central section of the crossbar, and couplings between the first and second mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the second mentioned plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including bolts extending through crossed horizontal and vertical slots respectively in said opposed plates, the heads of said bolts being upon the outer sides of the second mentioned plates, and cam means carried by said bolts upon the inner sides of the first mentioned plates and operable after the adjustment aforesaid is made to hold the mating portions of said plates in engagement with each other and to take up play between said first and second mentioned plates and between the projections of the second mentioned plates and the upright wall members.

14. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar, plates rigid with said crossbar at opposite ends thereof, one plate at each end, plates separate from the plates aforesaid and having projections detachably engaging selected perforations in said wall members, and couplings between the first and second mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted a predetermined distance horizontally and vertically relative to the second mentioned plates and upright members when the mating portions of the plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made.

15. The combination with a pair of opposed upright wall members, each having a plurality of

spaced perforations therein, each perforation being elongated in form and provided with a circular portion and narrow portions at diametrically opposite sides of said circular portion, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar, upright plates rigid with said crossbar at opposite ends thereof, one plate at each end, and upright plates separate from the plates aforesaid and having projections detachably engaging selected perforations in said wall members, each of said projections having portions substantially corresponding in cross section to the narrow and circular portions aforesaid of the selected perforations, the length of the narrow portions of said projections being less than the length of the narrow portions of said selected perforations so that such projections may be slid lengthwise of the perforations toward one end thereof after being inserted therein to cause the circular part of the projections to be positioned in rear of the narrow portions of the perforations, means for preventing accidental withdrawal of the projections from the selected perforations including means carried by the last mentioned plates and engageable with the selected perforations after the projections mentioned have been slid in said perforations as aforesaid, the crossbar having relatively movable sections, the first and second mentioned plates being in opposed substantially parallel relation to each other, the opposed surfaces of said plates having mating portions adapted to be separated from each other upon movement of one section of the crossbar relative to another, and couplings between the first and second mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the second mentioned plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made.

16. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar having a center section and end sections sleeved on opposite ends of the center section, inner and outer plates at each end of the crossbar disposed in opposed substantially parallel relation to each other, the inner plates being rigid with the end sections, the outer plates being separate from the inner plates and having projections detachably engaging selected perforations in the wall members, said center section being rotatable relative to both end sections, one of said end sections being slidable lengthwise of the center section, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of the slidable end section of the crossbar relative to the center section thereof, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating por-

tions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including bolts extending through crossed slots respectively in said opposed plates, the heads of said bolts being upon the outer sides of the outer plates, and means carried by said bolts upon the inner sides of the inner plates and operable after the adjustment aforesaid is made to hold the mating portions of said plates in engagement with each other.

17. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, comprising a crossbar having a center section and separate end sections extending lengthwise of said center section, the center section being rotatable relative to both end sections, one of said end sections being slidable lengthwise of the center section, opposed inner and outer plates at each end of the crossbar, the inner plates being secured to the end sections, the outer plates being separate from the inner plates and having projections detachably engaging selected perforations in the wall members, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of the slidable end section of the crossbar relative to the center section thereof, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made.

18. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, comprising a crossbar having a center section and separate end sections extending lengthwise of said center section, the center section being rotatable relative to both end sections, means carried by one of said end sections and engageable with the center section for holding the latter against rotation, the other of said end sections being slidable lengthwise of the center section, opposed inner and outer plates at each end of the crossbar, the inner plates being secured to the end sections, the outer plates being separate from the inner plates and having projections detachably engaging selected perforations in the wall members, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of the slidable end section of the crossbar relative to the center section thereof, and couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the outer plates when the mating portions of said plates are separated and while the projections aforesaid are in

engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made.

19. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, each perforation being elongated in form and provided with a circular portion and a narrow portion, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a crossbar, plates rigid with said crossbar at opposite ends thereof, one plate at each end, and plates separate from and opposed to the plates aforesaid and having projections detachably engaging selected perforations in said wall members, each of said projections having portions substantially corresponding in cross section to the narrow and circular portions aforesaid of the selected perforations, the length of the narrow portions of said projections being less than the length of the narrow portions of said selected perforations so that such projections may be slid lengthwise of the perforations toward one end thereof after being inserted therein to cause the circular part of the projections to be positioned in rear of the narrow portions of the perforations, means for preventing accidental withdrawal of the projections from the selected perforations including means carried by the last mentioned plates and engageable with the selected perforations after the projections mentioned have been slid in said perforations as aforesaid, and couplings between the first and second mentioned plates permitting the crossbar and first mentioned plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of the second mentioned plates while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings including means for holding said plates in engagement with each other after the adjustment aforesaid is made.

20. The combination with a pair of opposed upright wall members, each having a plurality of spaced perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members comprising a crossbar provided at each end thereof with opposed inner and outer plates, the inner plates being rigid with the ends of said crossbar, the outer plates being separate from the inner plates and having outward projections detachably engaging selected perforations in said wall members, the crossbar having relatively movable sections, the opposed surfaces of said inner and outer plates having mating portions adapted to be separated from each other upon movement of one section of the crossbar relative to another, couplings between the inner and outer plates permitting the crossbar and inner plates as a unit to be adjusted a predetermined distance horizontally and vertically over the inner surfaces of said plates when the mating portions of said plates are separated and while the projections aforesaid are in engagement with said selected perforations, so that the crossbar may be positioned relatively close to a load between the opposed upright wall members, said couplings in-

cluding means for holding the mating portions of said plates in engagement with each other after the adjustment aforesaid is made, and means carried by the outer plates and engageable with said wall members for preventing accidental withdrawal of the projections from the selected perforations in said wall members.

21. The combination with a pair of opposed upright wall members, each having a plurality of spaced elongated perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a substantially horizontal crossbar having laterally spaced transversely extending elongated projections carried by and projecting endwise from each end thereof and detachably engaging selected perforations in said wall members, the crossbar having at least two sections, one being slidable lengthwise of the other whereby the over-all length of the crossbar may be increased or decreased to compensate for any variation in the space between the upright wall members, the length of said elongated projections being less than the length of said selected perforations so that such projections may be slid lengthwise of the perforations toward one end thereof after being inserted therein to cause portions of the projections to engage the outer sides of said wall members, and means for preventing accidental withdrawal of the projections from the selected perforations including spring actuated means carried by the crossbar at opposite ends thereof and automatically engageable with at least one of the selected perforations in each wall member after the projections mentioned have been slid in said perforations as aforesaid, said spring actuated means substantially filling the space provided in said engaged perforations after the projections therein have been slid as aforesaid.

22. The combination with a pair of opposed upright wall members, each having a plurality of spaced elongated perforations therein, of a supporting member bridging the space between and adjustable relative to said wall members, said supporting member comprising a substantially horizontal crossbar having laterally spaced transversely extending elongated projections carried by and projecting endwise from each end thereof and inserted through selected perforations in said wall members, the crossbar having at least two sections, one being slidable lengthwise of the other whereby the over-all length of the crossbar may be increased or decreased to compensate for any variation in the space between the upright wall members, the length of said elongated projections being less than the length of said selected perforations so that such projections may be slid lengthwise of the perforations toward one end thereof after being inserted therethrough to cause a part of each projection to engage the outer side of the wall member through which it is inserted, and means for preventing accidental withdrawal of the projections from the selected perforations including means carried by the crossbar and engageable automatically with at least one selected perforation in each wall member after the projections have been slid in the perforations as aforesaid to prevent the projections from sliding back in said perforations, the automatic means being manually releasable to permit the projections to be disengaged from said selected perforations.

SYLVESTER E. HEBERT.