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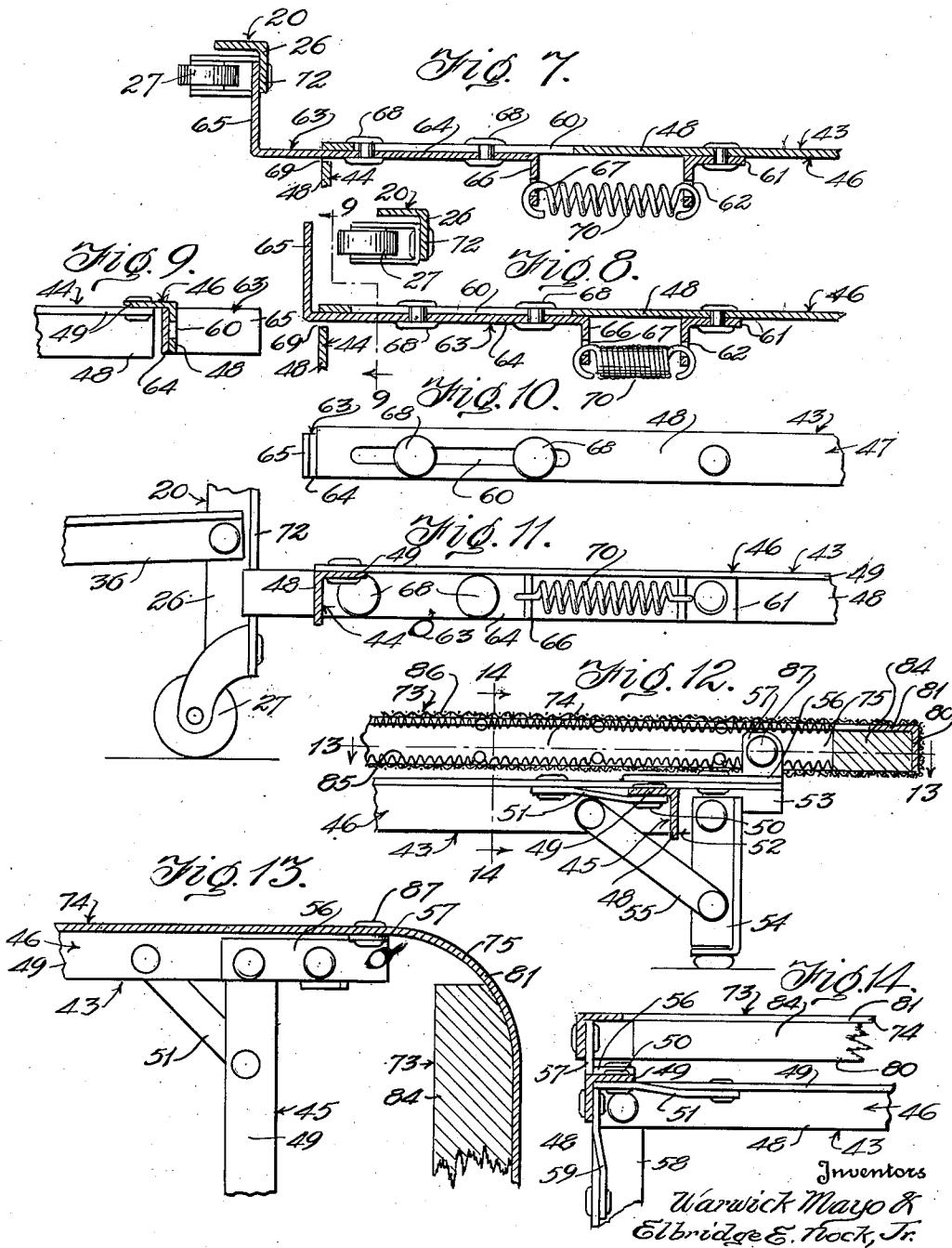
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CONVERTIBLE ARTICLE OF FURNITURE

Filed April 18, 1936

3 Sheets-Sheet 2



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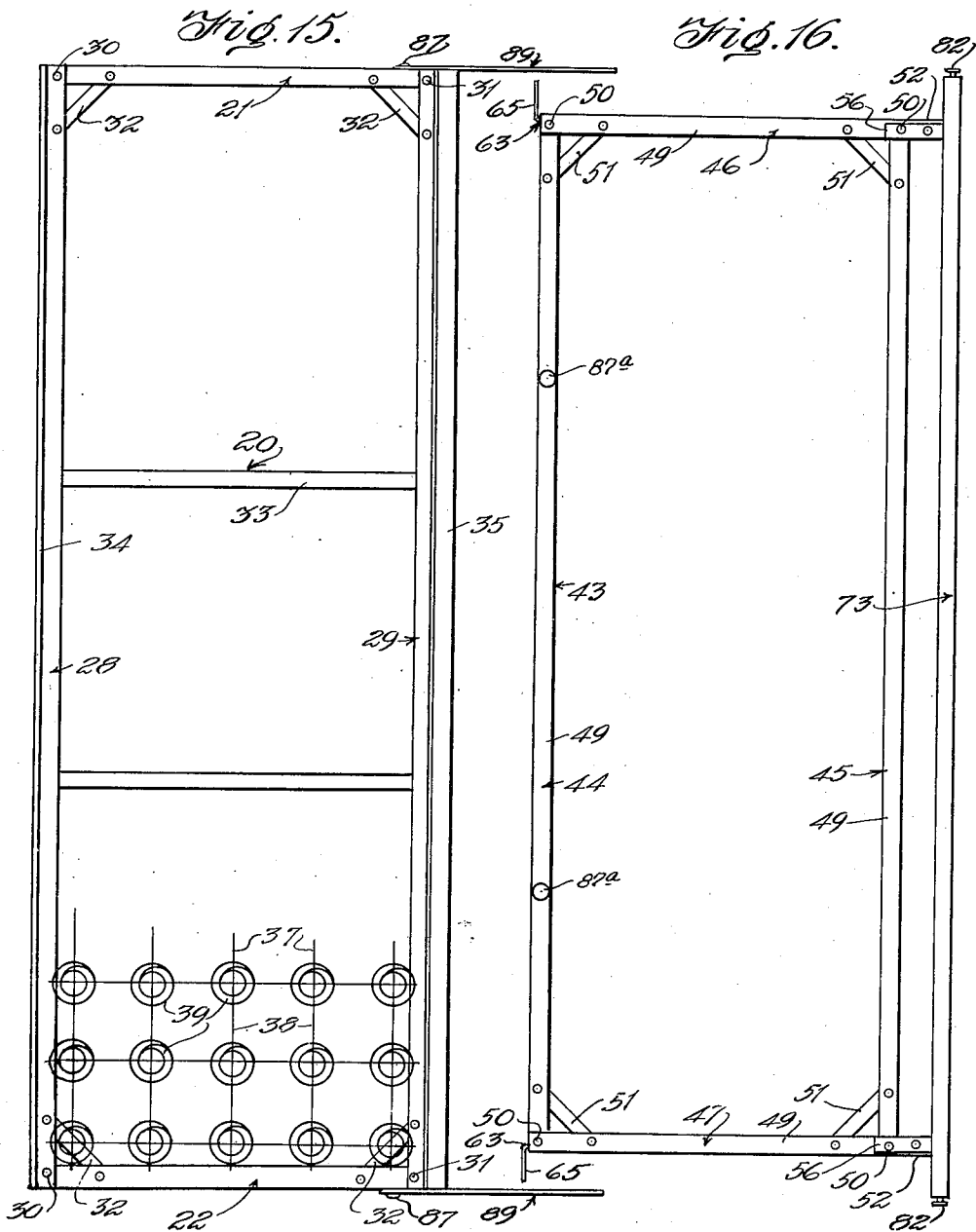
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CONVERTIBLE ARTICLE OF FURNITURE

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4 Claims. (Cl. 5—44)

This invention relates to a convertible article of furniture and has for its object to provide, in a manner as hereinafter set forth, an article of the class referred to capable of being converted from a couch into a twin bed.

A further object of the invention is to provide, in a manner as hereinafter set forth, an article of furniture of a day bed class having the elements thereof so formed and arranged relative to each other to enable the structure to be selectively used as a couch or twin bed when desired.

A further object of the invention is to provide, in a manner as hereinafter set forth, a foldable and extendible structure having as parts thereof a shiftable cushioned element constituting a couch, as well as a bed bottom for one of a pair of beds of the twin bed type and a foldable supported element capable of being disposed in flatwise horizontal position and in vertical position on one of its lengthwise edges and functioning when disposed horizontally as the bed bottom of the other bed of a pair of beds of the twin bed type and when disposed vertically on one of its lengthwise edges functioning as the back of the couch.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a foldable and extendible article of furniture for the purpose referred to which is simple in its construction and arrangement, strong, durable, compact, pleasing in appearance when in non-extended position, conveniently extended and folded when occasion so requires and comparatively inexpensive to manufacture with respect to articles of the class to which this invention belongs.

With the foregoing and other objects which may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically described and are as illustrated in the accompanying drawings wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a view looking towards one end of the structure illustrating the frames of the latter nested, one of the bed bottom elements in couch-back forming position and further illustrating in dotted lines the other bed bottom element and the pad or mattress employed in connection with the first mentioned bed bottom element.

Figure 2 is an end view of the supporting frames of the structure in extended relation when

the structure is converted into a pair of twin beds,

Figure 3 is a horizontal segmental view of the structure when converted into a pair of twin beds and with the pad or mattress employed in connection with one of the beds shown in dotted lines,

Figure 4 is a fragmentary view looking towards the inner face of one side of the supporting frame for the combined couch back and bed bottom forming element.

Figure 5 is a section on line 5—5 Figure 3,

Figure 6 is a fragmentary detailed view in side elevation,

Figure 7 is a section on line 7—7 Figure 3 with the spring controlled stationary frame stop in extended position,

Figure 8 is a view similar to Figure 7 with a spring controlled stop in contracted position,

Figure 9 is a section on line 9—9 Figure 8,

Figure 10 is a fragmentary view in side elevation illustrating the spring controlled stop in non-extended position,

Figure 11 is a fragmentary view in side elevation illustrating the spring controlled stop in engagement with the shiftable frame,

Figure 12 is a fragmentary view in vertical section of the stationary frame and of that bed bottom forming element carried by such frame and with such element in horizontal position,

Figure 13 is a section on line 13—13 Figure 12,

Figure 14 is a section on line 14—14 Figure 12,

Figure 15 is a top plan view of the shiftable frame detached from the stationary frame, and

Figure 16 is a top plan view of the stationary frame detached from the shiftable frame and further illustrating the bed bottom forming element carried thereby disposed at right angle thereto in a vertical position standing on one of its lengthwise edges.

With reference to the drawings and more particularly to Figures 1, 2, 3 and 15, the article of furniture, in accordance with this invention includes a rectangular slidable frame 20 formed with a pair of inverted U-shaped, vertically disposed side members 21, 22 including a top of angle shape cross section and a pair of sides of angle shape cross section. The side members 21, 22 are oppositely disposed and each has its top formed of a vertical leg 23 and a horizontal leg 24 which extends inwardly at right angles to the upper end of the leg 23. The front and rear of each of the side members is of angle shape cross section to form a pair of legs disposed at right angles to each other. The front and rear of each

side member constitute front and rear corner posts 25, 26. Castors 27 are carried by and positioned inwardly with respect to the said corner posts. The frame 20 further includes a front member 28 and a rear member 29 which are of angle shape in transverse section. The member 28 is oppositely disposed with respect to the member 29. The horizontal leg or flange of the member 28 is seated upon the front ends of the members 21, 22 and fixedly secured therewith as at 30. The vertical leg of the member 28 depends from the horizontal leg of said member and is arranged at the front of the members 21, 22. The horizontal leg of the member 29 is seated upon the rear ends of the members 21, 22 and is fixedly secured therewith as at 31. The vertical leg of the member 29 extends upwardly from the horizontal leg and aligns with the rear faces of the corner posts 26. Corner braces 32 are anchored to the front, rear and end members of the frame 20. The latter is formed with transversely disposed parallel braces 33 which are secured to the lower faces of the horizontal legs of the members 28, 29. Secured to the front and sides of the frame 20 and extending above and depending below the frame is a concealing member 34, preferably in the form of a wooden strip. Secured to the vertical leg of the rear member 29 of the frame as well as extending above said leg is a wooden strip 35. Each front corner post 25 is connected to a rear corner post 26 by an angle bar 36 which inclines downwardly from the rear corner post to the front corner post. The angle bars 36 are arranged within the side members 21, 22.

Connected to the horizontal legs of the side members 21, 22 are supporting wires 37 extending lengthwise of the frame 20. Connected to the horizontal legs of the front and rear members 28, 29 respectively are transverse wires 38 which interlace with the wires 37. The wires 37, 38 provide supports for upstanding springs 39 which are enclosed by a casing 40. Mounted on the casing 40 and suitably connected with the frame 20 is a pad or cushion 41. Secured upon the horizontal legs of the angle bars 36 are upstanding angle pieces 42 arranged in proximity to the corner post 26.

The frame 20 in connection with the springs 39, casing 40 and cushion 41, as well as the other elements referred to with respect to the frame 20 provides a shiftable or portable combined couch and bed bottom forming structure.

The convertible article of furniture includes a rectangular stationary frame 43 which is normally housed in the combined couch and bed bottom forming structure consisting of a front member 44, a rear member 45 and a pair of side members 46, 47. Each of said frame members is of angle shape in transverse cross section to provide a vertical leg 48 and a horizontal leg 49. The legs 49 extend inwardly from the upper end of the legs 48. The horizontal legs of the members 46, 47 are mounted upon the ends of the horizontal legs of the members 44, 45. The horizontal legs of the members 46, 47 are secured to the horizontal legs of the members 44, 45 by the holdfast means 50. Corner braces 51 connect the front and rear members 44, 45 to the side members 46, 47. The side members 46, 47 extend rearwardly from the frame member 45 as at 52 (Figure 12) and have the rear ends of their vertical legs reduced in width as at 53. Anchored to the vertical legs of the members 46, 47 rearwardly of the frame member 45 are rear supporting legs 54,

which are also connected to the vertical legs of the side members 46, 47 by inclined brace pieces 55. Secured upon the horizontal legs of the side members 46, 47 are strips 56 having upstanding arms 57 at the rear ends of the outer sides thereof. The strips 56 are flush with the rear ends of the members 46, 47. Abutting the inner faces of the legs of the front member 44 (Figure 3) are front supporting legs 58. The supporting legs 58 are connected to the vertical legs of the front member 44 by braces 59 (Figure 14).

The vertical legs 48 of the members 46, 47 between their vertical medians and their forward ends are formed with slots 60 (Figures 7 and 9) extending lengthwise thereof. Secured to the inner face of said legs 48 is an angle piece 61 having one of its flanges formed with an opening 62. Slidably positioned against the inner face of the said legs 48 is a stop 63 formed of an intermediate stretch 64, a forward stretch 65 and a rear-end stretch 66. Stretches 65, 66 extend in opposite directions with respect to each other and at right angles to the stretch 64. The end stretch 65 is of greater length than the end stretch 66. The latter is formed with an opening 67. The stretches 64 slide against the inner faces of the said legs 48 and oppose slots 60. Each stretch 64 is slidably connected to one of said legs 48 by the spaced connectors 68. Each connector includes a stem and a pair of heads. One head of a connector is arranged at the outer face of one of the said legs 48 and the other head of the connector is arranged against the rear face of one of the stretches 64. The stems of the connectors extend through the slots 60. The vertical leg 49 of the frame member 44 is slotted at each end. With reference to Figure 7 the slot is shown at one of the ends of the vertical legs of the frame member 44 and indicated at 69. The intermediate stretch 64 of a stop extends through the slot 69. The stretches 65 of the stops 63 extend into the rear corner posts 26 and coact with these latter for limiting the extending of the frames 20, 43 with respect to each other. Each of the stops 63 is formed with a cushioning spring 70 which has one end anchored to stretch 66 and the other end anchored to the angle piece 61. One end of the spring 70 extends through the opening 67 and the other end extends through the opening 62. The corner posts 26 are of angle-shape in transverse cross section and the stretches 65 of the stops 63 coact with the inwardly extending flanges 72 (Figures 7 and 8) of the corner posts 26.

The convertible article of furniture also includes a combined couch back and bed bottom forming element 73 which is pivotally connected to frame 43 and is capable of being supported in a horizontal position on said frame, (as shown in Figures 2 and 3), to constitute a bed bottom of a bed of a pair of twin beds as well as capable of being disposed upwardly at right angles relative to frames 20, 43 (as shown in Figure 1) to constitute the back of the couch.

The element 73 consists of a rectangular frame 74 of greater width and length than the frame 43 and formed with rounded corners 75. The front of frame 74 is designated 76, its rear 77 and its sides at 78, 79. The body of frame 74 is of angle-shape in transverse cross section throughout to provide the front, rear and sides thereof with a vertical and a horizontal leg 80, 81 respectively. The leg 81 extends inwardly from the upper end of the leg 80. Extended outwardly from the legs 80 of the sides of frame 74 are headed studs 82.

Secured against the inner faces of the front 76 and rear 77 of frame 74 are wooden strips 83, 84 respectively. Secured with the frame 74 is a cushioning or resilient web 85. The frame 74 is completely enclosed by a fabric casing 86 which is secured to the strips 83, 84. Extending through the bottom of the casing 86 (Figure 12) and pivotally connected, as at 87 to the legs 80 of the sides 78, 79 of the frame 74 are the arms 57 which are arranged in close proximity to the strip 84. The top of the front 44 of the frame 43 is provided with spaced cushions 87a (Figure 16) upon which the front 76 of frame 74 seats when frame 74 is disposed in horizontal relation with respect to frame 43.

Extended outwardly from the vertical legs of the angle pieces 42 (Figures 3, 5 and 16) are headed pivots 87 for the forward ends of the arms 88 of V-shaped links 89. These latter include rear arms 90 of greater length than the arms 88. The arms 90 in close proximity to their rear ends are formed with transverse notches 91 which open at the lower edges thereof. The arms 90 are coupled to the sides of the frame 74 by the headed studs 82 engaging in the notches 91.

It will be assumed that the structure is in the position as shown in Figure 1 and it is desired to convert it into a twin bed. The top of element 73 is swung forwardly and downwardly which causes frame 20 to be shifted forwardly from over frame 43 whereby the latter will extend rearwardly from frame 20 and the element 73 will assume the position shown in Figure 2. When restoring the structure from the position shown in Figure 2 to that shown in Figure 1, the front of element 73 is swung rearwardly and upwardly carrying the links 89 therewith whereby the frame 20 will be caused to shift rearwardly to enclose the frame 43.

Separation of frame 43 from frame 20 is prevented when frame 20 is shifted from over frame 43 by the coaction of the resilient stops 63 with the legs 72 of the corner posts 26.

With reference to Figures 1 and 3 a pad or mattress is shown in dotted lines and indicated at 92. When the article of furniture is used as a couch, as shown in Figure 1, the pad or mattress 92 is positioned upon the top of the pad 41. When the article of furniture is used as a twin bed, the pad or mattress 92 is mounted on the element 73.

The links 89 are arranged outwardly with respect to the rear corner posts 26 and the lower portions thereof are concealed by the element 34 when the element 73 is in couch back forming position. A suitable clearance is provided for the arms 88 of the links 89.

What we claim is:

1. A convertible article of furniture including a bodily shiftable couch structure forming one of the beds of a pair of twin beds and provided with a bottom frame having front and rear corner posts carrying castors, a supporting frame normally housed in the frame of the couch structure and including front and rear corner posts for supporting it, said structure being shiftable from over said supporting frame to provide for the latter being in rearwardly extending relation thereto, an element capable of being disposed horizontally upon said supporting frame to provide a bed bottom for the other bed of a pair of twin beds and capable of being extended upwardly substantially at right angles relative to said frames to provide a back for said couch structure, said element being pivotally connected to

said supporting frame, links pivotally connected to the sides of the frame of said structure and to the sides of said element, and yieldable limit stops resiliently connected to the sides of and extended forwardly and laterally from the front corner posts of the supporting frame and capable of abutting the rear of the other frame for arresting the forward shift of said structure relative to said supporting frame.

2. In a convertible article of furniture, a bodily shiftable couch structure forming one of the beds of a pair of twin beds and including a bottom frame formed with front and rear corner posts provided with front and rear supporting means, said frame provided near the rear end of each side thereof and below its top with an angle piece, a supporting frame adapted to be normally housed in the frame of the couch structure including front and rear supporting legs, said structure being shiftable from over said supporting frame to provide for the latter being in rearwardly extended relation thereto, upwardly extending arms connected with the rear ends of the sides of said supporting frame and disposed rearwardly of said supporting legs, an element capable of being disposed horizontally upon said support to constitute the bed bottom of the other bed of a pair of twin beds and capable of being disposed upwardly at right angles with respect to said frames to provide a back for the couch structure, said arms extending into said element means for pivotally connecting the rear ends of the sides of said element to the said arms, V-shaped links pivotally connected at one end to the said angle-shaped pieces and at the other end to the sides of said element, the pivots between said links and said element being so placed as to be positioned forwardly of said arms when said element is disposed horizontally on said supporting frame, and slidable stops resiliently connected to the sides of and extending forwardly through and laterally from the front legs of the supporting frame and capable of abutting the rear corner posts for arresting the forward shift of said structure relative to said supporting frame.

3. In a convertible article of furniture, a bodily slidable couch structure including a supporting frame having depending sides carrying castors, a stationary frame adapted to be normally housed in said supporting frame and extended in rearward relation with respect to said couch structure when the latter is shifted forwardly relative to said stationary frame, a combined couch back and bed bottom forming element pivotally connected in proximity to its rear with the rear end of the sides of said stationary frame, the sides of the frame of said couch structure being provided with braces, slidable angle-shaped stops positioned against the inner face of and resiliently connected to the sides of the stationary frame, said stops projected forwardly through and extended laterally in opposite directions relative to the front of the stationary frame and capable of engaging with the sides of the frame of said structure for arresting the forward movement of the latter relative to the stationary frame, and links pivotally connected at their forward ends with the said braces and at their rear ends to the sides of said element, the pivots for the rear ends of said links being so placed as to be positioned forwardly of the point of connection between the element and said stationary frame when said element is disposed horizontally on the stationary frame.

4. In a convertible article of furniture, a bodily

shiftable couch structure forming one of the beds of a pair of twin beds and including a bottom frame having front and rear corner posts provided with castors; a supporting frame having
5 front and rear supporting legs adapted to be normally housed interiorly of the couch structure frame; said structure being shiftable from a position over said supporting frame to provide for the latter being in rearwardly extended relation thereto; an element capable of being dis-
10 posed horizontally upon said support to constitute the bed bottom of the other bed of said pair of twin beds and also capable of being disposed upwardly substantially at right angles with respect
15 to said frames to provide a back for the couch structure; means for pivotally connecting said

element to the said supporting frame; links pivotally connected to said couch frame and said element, the pivots connecting said links and said element being so placed as to be positioned forwardly of the pivotal connection to the supporting frame when said element is disposed horizontally on said supporting frame; and slidable resilient stops connected to one of said frames and capable of engaging the other of said frames adjacent the corner posts thereof as the element
10 approaches said horizontal position for arresting the relative forward shift of said structure with respect to said supporting frame.

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