

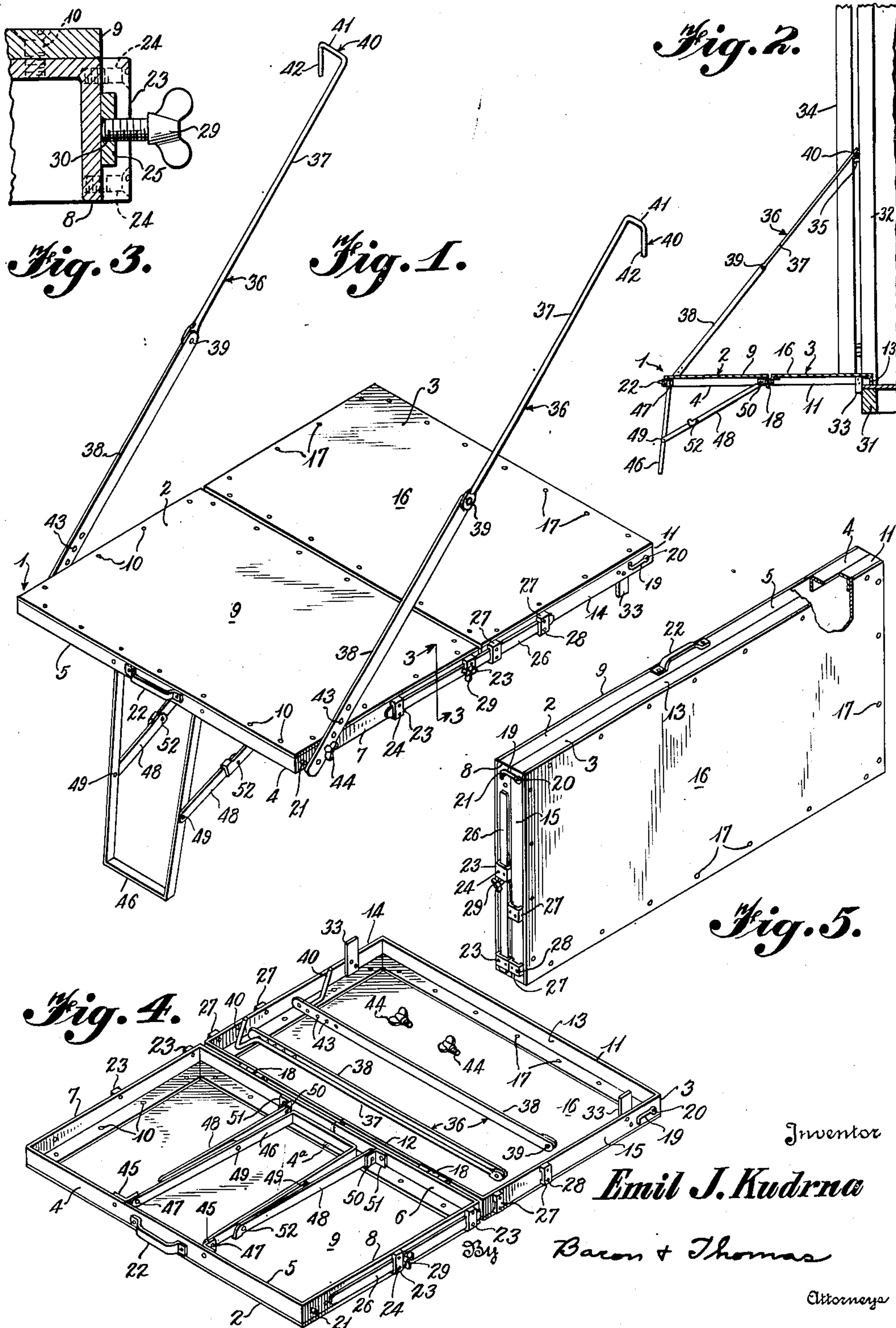
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FOLDABLE PLATFORM STRUCTURE

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FOLDABLE PLATFORM STRUCTURE

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The present invention relates to a foldable platform structure, and more particularly to such a structure for use in inspecting the cargo of refrigerated or other railway freight cars. However, it is to be understood that the invention is not limited to use with any particular structure, nor for any particular purpose, and that the same can be used wherever practicable.

The principal object of the invention is to provide a platform structure of mechanically simple construction which can be readily folded into a compact unit and manually carried from one place of use to another.

Another object of the invention is to provide a platform structure that can be readily assembled and mounted in operative association with any suitable opening in any structure.

Another object of the invention is to provide a foldable platform structure including means for enabling the user to ascend thereto and descend therefrom.

A more specific object of the invention is to provide a foldable platform structure that can be easily and quickly mounted upon a refrigerated or other railway freight car to facilitate cargo inspection.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a perspective view of a foldable platform structure embodying the principles of this invention;

Fig. 2 is a diagrammatic view, partly in section, illustrating the manner in which the platform structure shown in Fig. 1 can be associated with a freight car door opening;

Fig. 3 is a detail sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a perspective view illustrating the manner in which the step means for aiding the user in ascending to and descending from the platform can be folded into one of the two platform sections, and the hangers for suspending the platform folded and disposed in the other; and

Fig. 5 is a perspective view of the platform structure showing the same in its completely folded form wherein it assumes the general appearance of a flat suitcase.

Referring now in detail to the drawings, the platform is generally identified by the numeral 1 and comprises platform sections 2 and 3, respectively. The platform section 2 includes a substantially rectangular frame 4, which may be

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formed of bent angle iron, but is preferably made of a lighter metal such as any suitable aluminum or magnesium alloy. The frame 4 has side portions 5 and 6 and end portions 7 and 8, and may be made of one piece with the abutting ends welded, brazed or otherwise permanently secured together for rigidity, as indicated at 4^a in Fig. 4. A rectangular sheet 9 of plywood, or any other suitable flooring material, is secured to one of the flanges of each of the frame portions 5, 6, 7 and 8 by screws 10.

The platform section 3 includes a similar angle metal frame 11 having side portions 12 and 13 and end portions 14 and 15. A sheet 16 of plywood or other suitable flooring material is secured to one of the flanges of the frame portions 12, 13, 14 and 15 by screws 17.

The platform sections 2 and 3, as will be apparent, each resemble half of a conventional suitcase, and are connected together in side-by-side relation by hinges 18 (Figs. 2 and 4) secured in any desired manner to the side portion 6 of the frame 4 and the adjacent side portion 12 of the frame 11. The frame 11 of the platform section 3 has a hook 19 pivotally mounted upon each of the end portions 14 and 15 thereof by a stud 20. The hooks 19 engage pins 21 mounted upon the end portions 7 and 8 of the frame 4 of the platform section 2 and serve to hold the platform sections together in folded condition when not in use, as illustrated in Fig. 5. A handle 22 is riveted or otherwise secured to the side 5 of the frame 4 of the platform section 2 to facilitate carrying of the folded platform by the user in suitcase fashion.

The platform sections 2 and 3 are adapted to be opened up for use so that they lie substantially in a common horizontal plane, as illustrated in Figs. 1 and 2. A pair of guides 23 is secured to each of the end portions 7 and 8 of the frame 4 by means of screws 24. Each of the guides 23 is recessed as indicated at 25 (Fig. 3) to slidably receive a rigid bar 26. Similarly notched guides 27 are mounted upon each of the end portions 14 and 15 of the frame 11 by screws 28. A thumb screw 29 is threaded into an opening 30 (Fig. 3) formed in each of the rigid bars 26 and serves as a means for manually advancing and retracting the bars 26 relative to the guides 27. When the bars 26 are advanced, as shown in Fig. 1, they enter the notches in the guides 27 and rigidly interconnect the platform sections 2 and 3 and relieve all stress on the hinges 18. The bars 26 can be locked in their advanced positions by tightening the threaded end of the thumb screws 29 against

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the adjacent end portions 7 and 8 of the frame 4. When the bars 26 are moved to their retracted position, clear of the guides 27, as shown in Figs. 4 and 5, they may be locked in their retracted position by a similar tightening of the thumb screws 29, so that when the platform sections 2 and 3 are folded into the form of a suitcase, as illustrated in Fig. 5, the ends of the bars 26 will not project below the lower side of said suitcase.

The platform sections 2 and 3 are rigid and strong enough to support the weight of a man, and the platform section 3 is adapted to have the side portion 13 of the frame 11 thereof rest upon the sill 31 (Fig. 2) of a freight car door opening 32. Inward movement of the platform section 3 is limited by stops 33 fixedly secured to the frame end portions 14 and 15 and which stops engage the sill 31. It is conventional practice to hang each door 34 of a pair of refrigerator freight car doors by three hinges, including a middle hinge 35. The present construction takes advantage of this arrangement by providing a pair of hangers 36, each of which comprises two parts 37 and 38, pivotally connected by a pin 39. The free end of each hanger part 37 is bent laterally and downwardly to provide a hook 40 for detachable connection with the center hinges 35 of the doors 34 when said doors are open. The lateral portions 41 of the hooks 40 are adapted to rest upon the pin bearing portions of the hinges 35 and the downwardly extending portions 42 of said hooks are adapted to be disposed between the wings of the hinges 35 to hold the hangers in place, as will be readily understood. The free or lower end of each of the hanger parts 38 is provided with a plurality of holes 43 for adjustably connecting the same to the end portions 7 and 8 of the platform section 2 by means of thumb screws 44.

The side portion 5 of the frame 4 has a pair of brackets 45 (Fig. 4) riveted or otherwise secured thereto on the inner side thereof, and the ends of a generally U-shaped metal step member 46 are pivotally connected to the brackets 45 by pins 47. One end of a pair of stepladder-type braces 48 is pivotally connected by pins 49 to the step member 46, and the opposite ends of said braces are pivotally connected by pins 50 to brackets 51 riveted or otherwise secured to the side portion 6 of the frame 4. The step member 46 is shown in its extended position in Figs. 1 and 2 with the braces 48 holding said step member in said extended position to aid the user in ascending to the top of the platform structure and in descending therefrom. However, the parts of the braces 48 are adapted to be collapsed about their point of pivotal connection 52 to permit the step member 46 to be folded into the platform section 2 to assume the position illustrated in Fig. 4.

The hangers 36 are adapted to be detached from the platform section 2 by removing the thumb screws 44 and to be folded about their pivot pins 39 so that said thumb screws and hangers can be disposed within the platform section 3 when not in use, as is also illustrated in Fig. 4. With the bars 26 in retracted position, the platform sections 2 and 3 can then be folded into confronting relation and locked in their folded position by the hooks 19, as illustrated in Fig. 5, so that the entire platform structure can be readily transported manually.

The platform structure described hereinabove, although light in weight and readily portable, provides a very firm and rigid platform upon which the user can stand to inspect the contents

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of a freight car, or perform any other duty on any other structure with which the platform may be associated. In connection with the latter, it will be understood that the ends 40 of the hangers 36 can be fashioned into other than hook-form, depending upon the character of opening with which the platform is to be associated and the type of fastening means best suited for use with a particular opening.

While one specific embodiment of the invention has been disclosed herein, it will be understood that various changes may be made in the details of construction of the parts thereof without departing from the spirit of the invention or the scope of the annexed claims.

I claim:

1. A platform for use in inspecting the cargo in a freight car, comprising: a pair of platform sections disposed side-by-side in alignment in a substantially common horizontal plane; hinge means pivotally interconnecting said platform sections along the adjacent edges thereof, said platform sections being adapted to be folded into confronting relation when not in use; detachable connecting means rigidly interconnecting the ends of said platform sections in alignment in said common plane to eliminate strain on said hinge means, one of said platform sections being adapted to have one end thereof rest upon the sill of a doorway opening of a freight car; a pair of hangers; detachable means securing one end of each of said hangers to the other of said platform sections, the other end of each of said hangers being adapted to be detachably connected with said freight car adjacent the sides of said doorway; a step member pivotally suspended from said other platform section, said step member being extensible and having a height less than the width of said other platform section; a brace connected with said step member and said other platform section for maintaining said step member in said extended position; and means carried by and projecting downwardly from said one platform section for limiting inward movement of said one platform section relative to said doorway opening.

2. A foldable platform, comprising: a pair of platform sections, each of said platform sections including a generally rectangular frame and a sheet of flooring material secured to said frame; hinge means securing said platform sections together, whereby said platform sections can be folded inwardly into confronting relationship with the sheets of flooring outermost to provide a closed receptacle; detachable connecting means rigidly interconnecting the ends of said platform sections in alignment to position the flooring sheets in a common horizontal plane to eliminate strain on said hinge means; a pair of hanger members each having one end thereof detachably connected with the same one of said platform sections, each hanger member comprising two sections connected by a pivot and adapted to be detached and reduced in length by folding about said pivot to enable the same to be stored within at least one of the platform sections when not in use; a step member; means pivotally mounting said step member on one of said platform sections, said step member having a height less than the width of said one platform section so that said step member can be alternatively received within said one platform section or swung into an extended position for service in aiding the user to ascend to or descend from the floor of the platform; and a brace con-

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nected with said step member and said one platform section for maintaining said step member in said extended position.

3. A foldable platform, comprising: a pair of platform sections, each of said platform sections including a generally rectangular angle frame and a sheet of flooring material secured to a flange of said angle frame; hinge means securing said platform sections together, whereby said platform sections can be folded inwardly into confronting relationship with the sheets of flooring outermost to provide a closed receptacle; detachable connecting means rigidly interconnecting the ends of said platform sections in alignment to position the flooring sheets in a common horizontal plane to eliminate strain on said hinge means; a pair of detachable hanger members each having one end thereof connected with the same one of said platform sections for suspending the platform relative to an opening in a structure, each of said hanger members comprising two sections connected by a pivot and adapted to be detached and reduced in length by folding about its pivot to enable the same to be stored within at least one of the platform sections when not in use; a step member; means pivotally mounting said step member on the frame of one of said platform sections, said step member having a height less than the width of said one plat-

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form section so that said step member can be alternatively received within said platform section or swung into an extended position for service in aiding the user to ascend to and descend from the floor of the platform; and a brace connected with said step member and said frame of said one platform section for maintaining said step member in said extended position.

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