

Jan. 22, 1935.

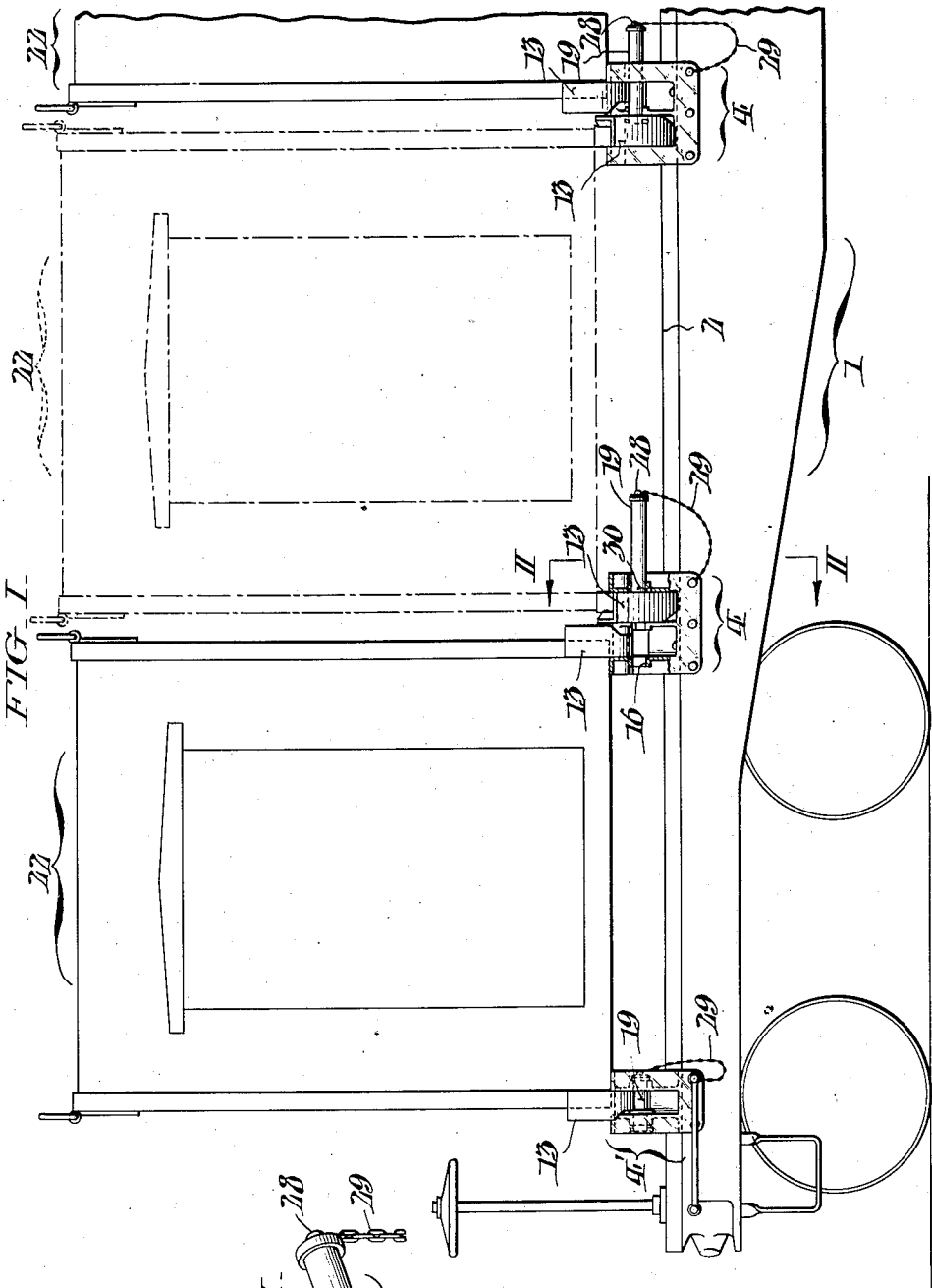
F. K. FILDES

1,988,651

ATTACHMENT FOR CONTAINER CARRIERS

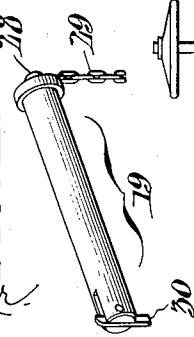
Filed Aug. 10, 1933

2 Sheets-Sheet 1



WITNESSES:
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FIG. VI.



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FIG. II

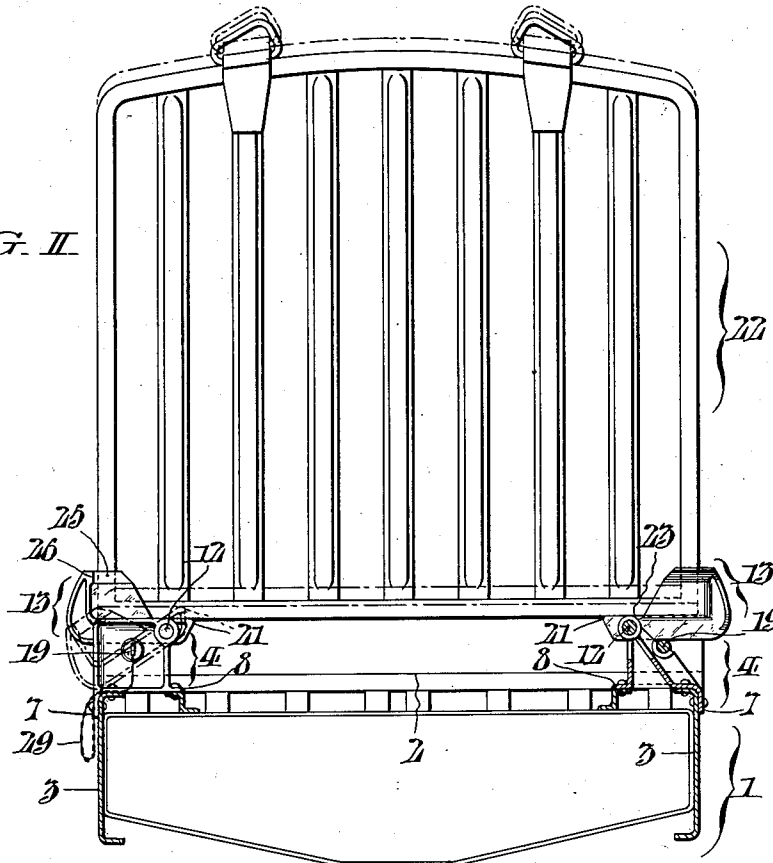


FIG. III

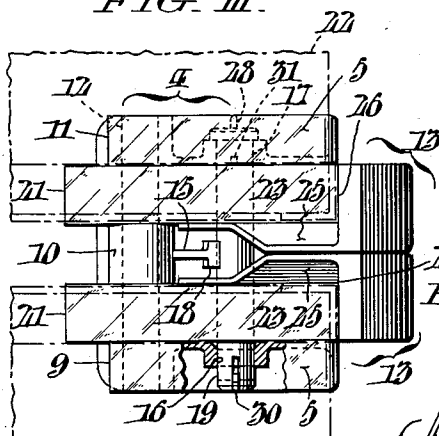


FIG. IV

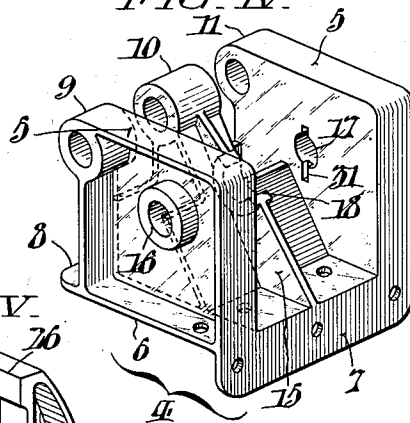
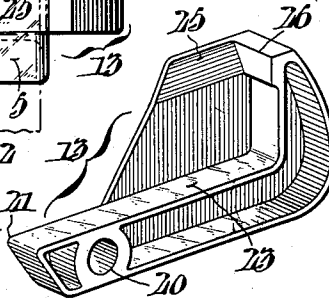


FIG. V



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UNITED STATES PATENT OFFICE

1,988,651

ATTACHMENT FOR CONTAINER CARRIERS

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Application August 10, 1933, Serial No. 684,485

5 Claims. (Cl. 105—366)

This invention relates to container carriers, such as railway cars, motor trucks or trailers, and more specifically to attachments for holding a container against shifting while it rests on the carrier, yet facilitating its removal incident to the raising of the container from its seat. In certain respects the invention represents an improvement upon the type of container carrier disclosed in U. S. Letters Patent No. 1,845,594, granted to me on February 16, 1932.

One object of the invention is to provide attachments for a container carrier characterized by seating abutments effective to prevent both lateral and longitudinal shifting of a container and movable to positions above and beneath the container supporting surfaces.

Another object of the invention is to provide attachments of such character affording adequate clearance above the floor of the carrier for the insertion of a lift truck, or other container transfer apparatus, below the individual containers whereby they may be readily removed from the carrier to an adjacent platform or vehicle.

Still another object of the invention is the provision of a container carrier embodying the above features and yet having a substantially unobstructed floor space whereby the carrier may be readily converted to other uses than for the carriage of containers.

The foregoing and other objects and advantages will become more fully apparent from the description hereinafter set forth of one embodiment or example of my invention, having reference to the accompanying drawings, whereof:

Fig. I represents a part side elevation of a railway flat car fitted with attachments of my invention with certain parts broken away to better disclose important details.

Fig. II represents an enlarged cross section of the same, taken as indicated by the lines II—II of Fig. I.

Fig. III represents an enlarged plan view of one individual container supporting attachment showing its relation to the corners of two adjacent containers.

Fig. IV represents a perspective view of the container supporting attachment.

Fig. V represents a perspective view of one of the movable shift-restraining abutments; and,

Fig. VI represents a perspective view of a locking pin associated with each container supporting attachment.

With particular reference to Fig. I of the drawings, the numeral 1 designates, comprehensively, a portion of a railroad flat car, and 2 the support-

ing floor or platform thereof. At spaced intervals along the side sills 3, I dispose a series of container supporting attachments comprehensively designated at 4, 4' and in view of the fact that the several units are duplicates of one another, excepting the end ones 4', the following description is limited to an explanation of one individual attachment, thereby avoiding repetition.

Each supporting attachment 4, in the illustrated example of my invention, is in the form of a substantially rectangular casting and includes parallel top and base surfaces 5, 6, respectively. The base surfaces 6, together with a depending vertical flange 7 and an inwardly projecting horizontal flange 8, are secured by rivets to the underframe at the side sills 3 of the car. Each supporting attachment 4 has upstanding arms 9, 10, 11 and is interiorly recessed in the spaces between these arms. Through holes in the upper ends of the arms 9, 10, 11 there extends a pivot pin 12 which supports a pair of swinging abutments 13 hereinafter more particularly described.

Each supporting attachment 4 includes a central rib 15, and there are holes 16, 17 at the sides of the attachment, and a part circular cavity 18 in the central rib 15, which holes are adapted to accommodate a locking pin 19, the latter element being removable and serving to maintain the swinging abutments 13 in raised position.

As most clearly illustrated in Fig. V, each swinging abutment 13 is generally in the form of a hook having a bearing 20 fitting on the pivot pin 12 and having a heel 21 adapted to engage the bottom of a container, such as represented at 22. Each swinging abutment 13 has a flat surface 23 which, when containers are seated on the car, assumes a substantially horizontal position approximating the level of the adjacent top surface 5 of the supporting attachment 4. Above the flat surface 23 of each container seating abutment 13 are upstanding members 25, 26, one such member 25 extending transversely of the car platform 2 and the other member 26 extending longitudinally of the car platform outside the side sill 3. The upstanding members 25, 26 together define a corner for a container seat, and when all of the abutments 13 are in the raised position they are effective to prevent both lateral and longitudinal shifting of a container. There are four swinging abutments 13 for each container to be carried on the car, and in an obvious manner each set of four abutments defines a rectangular seat for accommodating the base of a container.

The end attachments 4' in most respects struc-

turally conform with the foregoing description of the intermediate attachments 4 excepting that they are each fashioned to accommodate only one swinging abutment 13; and hence further explanation thereof is deemed unnecessary.

Each swinging abutment 13 is so mounted with respect to its supporting attachment 4, 4' that it is normally off balance tending to swing downward by gravity into the recessed interior of the abutment 4, 4' as indicated in dot and dash lines at the left hand of Fig. II. The short heel 21 of the swinging abutment enables the same to recede automatically into the recessed interior of the supporting attachment 4 as soon as the container has been raised a short distance above the container supporting surfaces 5.

The locking pins 19 are utilized for the purpose of temporarily maintaining the swinging abutments 13 in raised position preparatory to the lowering of a container onto the car platform 2. Each locking pin is preferably constructed as shown in Fig. VI and has at one end an eye 28 by means of which it is attached to the end of a chain 29 and thus protected against loss. The opposite end of the locking pin 19 is slotted and provided with a swinging keeper 30 which holds the locking pin in place when it is inserted through the openings 16, 17 of the supporting attachment 4. As the locking pin 19 passes through the hole 16 the keeper 30 swings upward and then downward automatically locking itself against dislodgment. At the openings 17 in the upstanding arm 11 of the supporting attachment 4 there is provided a recess 31 of a size sufficient to accommodate the keeper 30. The recess 31 allows the locking pin 19 to be withdrawn completely out of the way of both swinging abutments 13 so as not to obstruct their movement, and yet permits the locking pin to be retained within the attachment 4.

It will be observed that each attachment 4, 4' affords elevated support for the bottom corners of two adjacent containers. The gap intervening between the bottom of a container and the floor 2 of the container carrier permits a lift truck or other hoisting means to be inserted between the car floor and the container whereby the container may be removed from the carrier onto an adjacent platform or vehicle. It will also be observed that when containers are seated on the swinging abutments 13 the load is not carried on the locking pins 19 and these pins may be readily removed.

The operation of the above described container carrier is as follows: In the event that the containers 22 are to be transferred onto the railway car 1, by overhead hoisting apparatus, the car is prepared to receive the containers by manually raising each swinging abutment 13 and locking the same in raised position by insertion of the locking pins 19. In the event that the containers 22 are to be transferred to the railway car by a lift truck, there is ordinarily no necessity of utilizing the locking pins 19. When containers are seated on the car, the formation of the seating abutments 13 is such as to effectively prevent shifting in any direction, and there is no danger of dislodgment of a container.

When it is desired to remove the containers 22 from the car 1, by means of a lift truck, if the locking pins 19 are in place they are shifted to the extreme outward position. Then when the lift truck raises the container 22 from the supporting

surfaces 5, the abutments 13 are caused to recede automatically by gravity into the interior recesses of the attachments 4, 4' with which they are associated. When a container is to be raised and shifted by an overhead hoisting apparatus, it is not necessary to disturb the locking pins 19.

It is to be especially noted that the container carrier of my invention can be used with many types of container transferring apparatus, and that inasmuch as the central floor space of the carrier is unobstructed, the carrier may also be at once converted to ordinary flat car use.

While I have described and illustrated one particular example of my invention, it will be apparent that various changes may be made in the form of the apparatus disclosed without departing from the spirit of the invention as defined in the annexed claims.

Having thus described my invention, I claim:

1. In combination with a container carrier having a substantially unobstructed central floor space, spaced attachments on the sides of the carrier affording elevated support for a container, and seating abutments movable on said supports, said abutments being effective to prevent both lateral and longitudinal shifting of a container, and being adapted automatically to recede below the container supporting surfaces when a container is raised therefrom.

2. In combination with a container carrier, spaced attachments above the floor of the carrier affording elevated support for a container, and seating abutments pivotally mounted on said supports and adapted to recede by gravity below the container supporting surfaces when a container is raised therefrom, said abutments having upstanding members defining corners of a container seat and being effective to prevent both lateral and longitudinal shifting of a container.

3. In combination with a container carrier, spaced attachments above the floor of the carrier affording elevated support for a container, seating abutments pivotally mounted on said supports and off balance so as to recede by gravity when a container is raised therefrom, said abutments having upstanding members defining corners of a container seat and being effective to prevent both lateral and longitudinal shifting of a container, and means for locking said abutments in raised position.

4. In combination with a container carrier, spaced attachments mounted on the sides of the carrier, seating abutments pivotally mounted on said attachments and off balance so as to recede by gravity when a container is raised therefrom, said abutments having upstanding members defining corners of a container seat and being effective to prevent both lateral and longitudinal shifting of a container, and locking pins removably inserted between the attachments aforesaid and the bottom surfaces of the abutments for maintaining the abutments in raised position.

5. In combination with a container carrier, spaced attachments on the sides of the carrier, seating abutments in the form of hooks swingably mounted on said attachments with their heels adapted to engage the bottom of a container, and off balance so as to recede by gravity when a container is raised therefrom, said abutments having upstanding walls defining corners of a container seat, and means for locking said abutments in raised position.

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