

July 17, 1934.

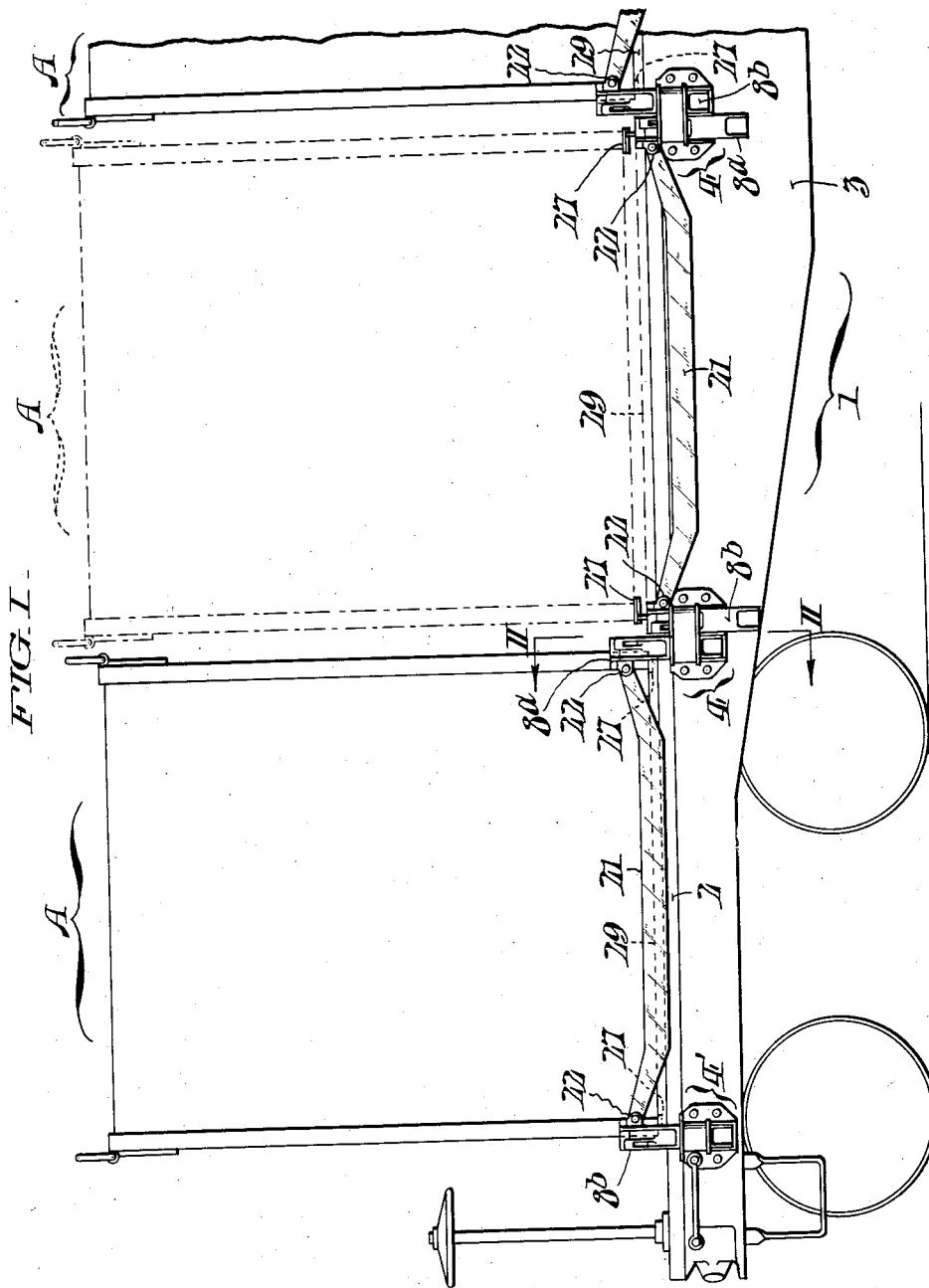
F. K. FILDES

1,966,492

ATTACHMENT FOR CONTAINER CARRIERS

Filed Aug. 10, 1933

2 Sheets-Sheet 1



WITNESSES:

Thomas W. Kerr, Jr.
William Bell, Jr.

INVENTOR:

Frederick K. Fildes

BY

Foley Paul
ATTORNEYS.

July 17, 1934.

F. K. FILDES

1,966,492

ATTACHMENT FOR CONTAINER CARRIERS

Filed Aug. 10, 1933

2 Sheets-Sheet 2

FIG. II

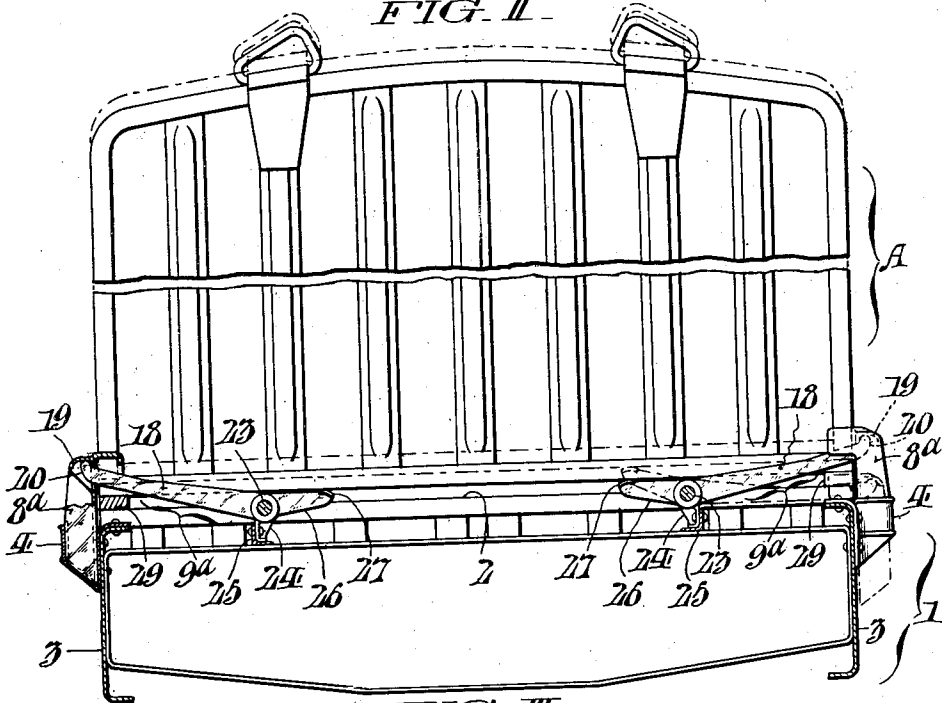


FIG. III

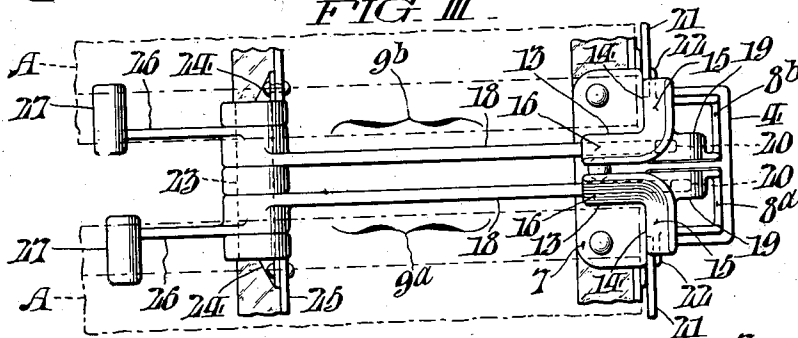


FIG. V

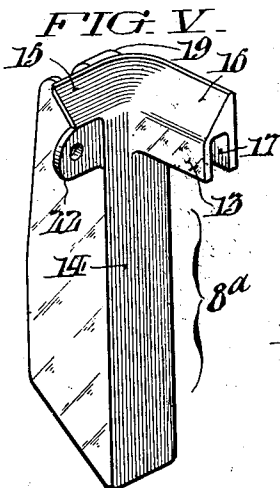


FIG. IV

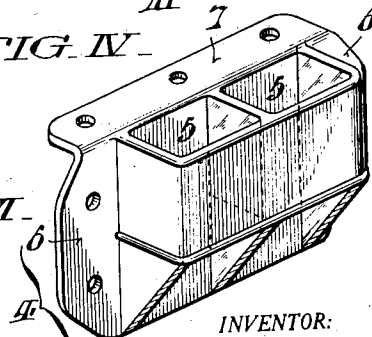
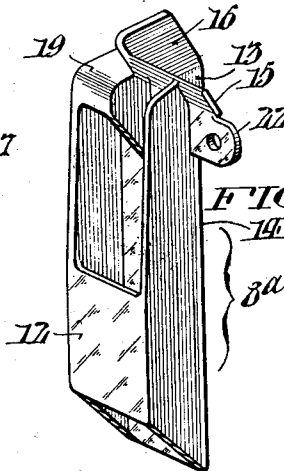


FIG. VI



INVENTOR:
Frederick K. Fildes,
BY *Tracy Paul*,
ATTORNEYS.

UNITED STATES PATENT OFFICE

1,966,492

ATTACHMENT FOR CONTAINER CARRIERS

Frederick K. Fildes, Altoona, Pa.

Application August 10, 1933, Serial No. 684,484

8 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 a relatively short distance above 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 which are effective to prevent both lateral and longitudinal shifting of a container and movable automatically to positions above and beneath the container supporting surfaces incident to the operations of lowering and raising the container with respect to the carrier.

Another object of the invention is to provide container seating abutments arranged in pairs at each side of the car, with each pair connected by a barrier which extends across the end wall of a container and serves to guard the same while it is seated on the carrier, each barrier being automatically lowered with the abutments to inoperative position when the corresponding container has been raised from the car.

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.

Fig. II represents an enlarged cross section of the same, taken as indicated by the lines II—II of Fig. I, with certain of the parts broken away for clearness of illustration.

Fig. III represents an enlarged plan view of the same.

Fig. IV represents a perspective view of one of the fixed attachments at the sides of the car.

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

Fig. VI represents a perspective view of the

outside of one of the movable shift-restraining abutments.

With particular reference to Fig. I of the drawings, the numeral 1 designates comprehensively a portion of a railroad flat car and 2 the floor or platform thereof. The car is substantially unobstructed throughout its central floor space. At spaced intervals along the side sills 3 there are fixed attachments designated at 4, 4'. In view of the fact that the several attachments 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 fixed attachment 4, in the illustrated example of my invention, is in the form of a casting having two adjacent rectangular pockets 5, constructed in the manner of stake pockets, and having flanges 6 which are attached to the web of the side sill 3 of the car, and an additional flange 7 which is attached to the top surface of the side sill 3. The detailed construction of the attachments 4 is most clearly illustrated in Fig. IV. Each fixed attachment 4 accommodates two sliding abutments 8a, 8b which are guided for vertical movement within the attachments, and which are raised and lowered by operation of bell crank levers 9a, 9b.

The end attachments 4' in most respects structurally conform with the foregoing description of the intermediate attachments 4 except that they are shaped to accommodate only one sliding abutment, and hence further explanation thereof is deemed unnecessary.

The sliding abutments 8a, 8b are counterparts of each other except that the top portion of one is formed in a reverse manner to the top portion of the other. Each sliding abutment 8a, 8b includes a vertical leg 12 of substantially U-shaped cross section which fits within a pocket 5 of one of the fixed attachments 4. The detailed construction of one of the sliding abutments 8a is most clearly illustrated in Figs. V and VI. At its upper end each sliding abutment 8a, 8b is formed with an upstanding wall 13 which extends inward over the floor of the car in a plane transversely of the car, and an additional upstanding wall 14 which extends longitudinally of the car just beyond the side edge thereof. The two upstanding walls 13, 14 serve as shift-restraining elements and define corners against which the corners of a container, such as illustrated at A, is adapted to be seated. The upstanding walls 13 serve to restrain longitudinal shifting of a container on the carrier, whereas the upstanding

wall 14 serves to restrain transverse shifting of a container on the carrier. At their top edges the walls 14 are inclined upwardly and outwardly as indicated at 15, and similarly the upstanding walls 13 are inclined upwardly and away from the adjacent container, as indicated at 16. In an obvious manner the inclined surfaces 15, 16 assist in guiding a container to seated position on the carrier.

At its upper end each sliding abutment 8a, 8b is formed with a cavity 17 into which the long arms 18 of the bell crank levers 9a, 9b project. At the top of each cavity 17 there is a smoothly curved bearing surface 19 which is engaged by the rounded upturned end 20 of the lever arm 18. It will be readily apparent that upward swinging movement of the bell crank levers 9a, 9b causes the abutments 8a, 8b to be raised vertically while guided by the attachments 4.

In the illustrated example of my invention, the car 1 is adapted to carry a number of containers A and has four sliding abutments 8a, 8b for each container, each abutment serving to engage a corner of a container. Moreover, in the illustrated example, opposite pairs of sliding abutments 8a, 8b are connected by barriers 21 which extend across the end walls of the containers, serving as an additional safeguard against dislodgment of the containers from their seated positions. Each barrier 21 may conveniently take the form of a flat plate riveted at its ends to flanges 22 of the sliding abutments 8a, 8b.

The bell crank levers 9a, 9b are mounted for swinging movement on shafts 23 which are supported by castings 24. The castings 24 are in turn secured to angle bars 25 running longitudinally and forming a part of the car frame spaced inwardly from the side sills 3. Each bell crank lever 9a, 9b includes a short arm 26 terminating at its inner end in a pedal 27 which is engaged by the bottom surfaces of a container, as it is lowered onto the carrier. To permit the installation of the bell crank levers 9a, 9b in the manner shown, the car floor 2 is cut away in the vicinity of the bell crank levers. Moreover, at the sides of the car, elevated supports for the containers in the form of narrow wood strips 29 are preferably employed. The supporting strips 29 extend longitudinally from one attachment 4 to another and cause the containers to be raised slightly above the car floor 2, thus affording ample space for the short arms 26 of the bell crank levers 9a, 9b between the car floor and the bottom surfaces of the containers. It will be noted that the long arms 18 of the bell crank levers 9a, 9b are disposed outside of the container seating spaces, so that there is no opportunity for the containers to interfere with their operation.

The operation of the above described container carrier is as follows: In the event that containers A are to be transferred onto the railway car 1 by overhead hoisting apparatus, the operator proceeds to lower a container onto the car in a position directly above and square with the seating space into which the container is to be lowered. Incident to the lowering of the container, its bottom surface will strike the pedals 27 of the bell crank levers 9a, 9b and cause the short arms 26 of the levers to be depressed and the long arms 18 to be swung upward. With upward movement of the long arms 18 of the bell crank levers 9a, 9b the engagement of their upturned ends 20 with the bearing surfaces 19 of the sliding abutments 8a, 8b causes the abutments to be raised vertically from positions beneath the top surfaces of

the elevated strips 29 to positions above the same.

Incident to raising of the sliding abutments 8a, 8b, their upstanding walls 13, 14 will surround the corners of the container which is being deposited on the car and will assist in the positioning of the container by guiding its corners along the inclined surfaces 15, 16, causing the container to be squarely seated on the carrier. After the containers have been thus deposited upon the car, the upstanding walls 13 of the abutments 8a, 8b will be effective to prevent longitudinal shifting of the containers, and the upstanding walls 14 will be effective to prevent transverse shifting of the containers. Furthermore, the barriers 21 will be effective to guard the end walls of the container.

When a container is removed from the car by means of an overhead hoist, as soon as the bottom surface of the container is raised a short distance above the car floor 2, the sliding abutments 8a, 8b will fall by gravity, to positions beneath or substantially level with the elevated supports 29, with downward swinging of the arms 18 of the bell crank levers 9a, 9b and upward swinging of their short arms 26 as shown in dot-and-dash lines in Fig. II. Likewise the barriers 21 will automatically recede to inoperative positions incident to the initial movement in raising a container from its seat as shown in Fig. I. Accordingly, when a container has been raised a slight distance above the car floor, it may then be shifted laterally to a truck or station platform or any other location where it is desired to place the container.

It is to be especially noted that the container carrier of this invention can be used with many types of container transfer apparatus, and that inasmuch as the central floor space of the carrier is unobstructed, the carrier may at once be converted to ordinary flat car use. Moreover, the container carrier of this invention is particularly useful where containers are handled by hand-operated hoisting apparatus because the containers need only be raised a short distance above the carrier floor preparatory to their lateral shifting onto or off the carrier.

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, spaced attachments attached to and extending outwardly beyond the sides of the carrier, container shift-restraining abutments guided for vertical movement within said attachments, and levers extending from said abutments inwardly over the floor of the carrier for engagement with the bottom of a container, said levers serving to raise the abutments to operative shift-restraining positions incident to the lowering of a container onto the carrier.

2. In combination with a container carrier, spaced attachments attached to and extending outwardly beyond the sides of the carrier, container shift-restraining abutments guided for vertical movement within said attachments, and levers pivoted to the carrier and extending from said abutments inwardly over the floor of the carrier for engagement with the bottom of a container, said abutments being normally urged by gravity to depressed positions not obstructing the lateral transfer of containers, and said levers serving to raise the abutments to opera-

tive shift-restraining positions incident to the lowering of a container onto the carrier.

3. In combination with a container carrier, spaced attachments attached to and extending
5 outwardly beyond the sides of the carrier, abutments guided for vertical movement within said attachments and having upstanding members effective to prevent both lateral and longitudinal
10 shifting of a container, and levers extending from said abutments inwardly over the floor of the carrier for engagement with the bottom of a container, said levers serving to raise the
15 abutments to operative shift-restraining positions incident to the lowering of a container onto the carrier.

4. In combination with a container carrier having a substantially unobstructed central floor space, spaced attachments attached to the
20 sides of the carrier, including pockets extending beyond the side sills, elevated supports for a container extending above the carrier floor, container shift-restraining abutments guided for vertical movement within said pockets, and
25 means for automatically raising said abutments from positions beneath said elevated supports, to positions thereabove incident to the lowering of a container onto the carrier.

5. In combination with a container carrier, spaced attachments on the sides of the carrier
30 including pockets extending beyond the side sills, elevated supports for a container extending above the carrier floor, shift-restraining abutments guided for vertical movement with said pockets, and levers pivoted to the carrier be-
35 neath said supports and extending from said abutments inward over the floor of the carrier for engagement with the bottom of a container, said levers serving to raise the abutments from positions beneath said supports to positions

thereabove incident to the lowering of a container onto the carrier.

6. In combination with a container carrier having a substantially unobstructed central floor
80 space, spaced attachments on the sides of the carrier including elevated supports for the corners of a container extending above the carrier floor, abutments guided for vertical movement within said attachments and having upstanding
85 members effective to prevent both lateral and longitudinal shifting of a container, and means for automatically raising said abutments from positions beneath said elevated supports to positions thereabove incident to the lowering of
90 a container onto the carrier.

7. In combination with a container carrier, spaced attachments on the sides of the carrier, container shift-restraining abutments guided for
95 vertical movement within said attachments, barriers connecting opposite pairs of said abutments and serving to guard the end walls of a container when seated on the carrier, and means for automatically raising said abutments and
100 barriers to operative positions incident to the lowering of a container onto the carrier.

8. In combination with a container carrier, spaced attachments on the sides of the carrier, elevated supports for a container extending
105 above the carrier floor, container shift-restraining abutments guided for vertical movement within said attachments, barriers connecting opposite pairs of said abutments and serving to guard the end walls of a container when
110 seated on the carrier, and means for automatically raising said abutments and barriers from positions beneath said elevated supports to positions thereabove incident to the lowering of a container onto the carrier.

FREDERICK K. FILDES.

40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150