United States Patent [19]

Brindle

[11] **3,830,537**

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[54] **SECURING DEVICE FOR MOVABLE MEMBERS**

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[52] **U.S. Cl.** **292/259,** 292/62

[51] **Int. Cl.** **E05c 19/18**

[58] **Field of Search** 292/259, 57–62, 292/205; 70/128, 84, 137

[56] **References Cited**

UNITED STATES PATENTS

184,501	11/1876	Buckley	292/62 X
1,639,661	8/1927	Newcomb	292/57
1,828,912	10/1931	Tobin et al.	292/259
1,907,625	5/1933	Vogt	70/128 X

FOREIGN PATENTS OR APPLICATIONS

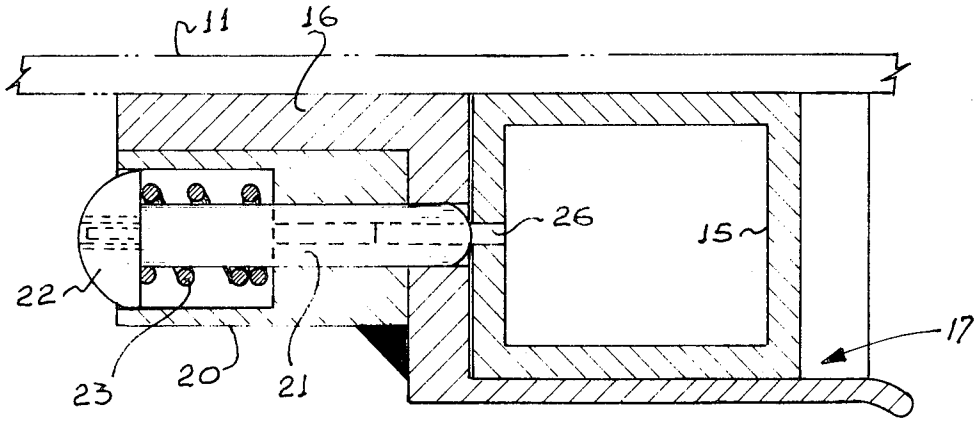
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Primary Examiner—James R. Boler
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[57] **ABSTRACT**

A securing device for latching two relatively movable members together comprising an elongated sleeve for fixed attachment to one of said members, a latch pin, spring-actuated to slide in one direction in said sleeve, which may be key-actuated to rotate in said sleeve, and having a hook-like radial terminal fin rotatable by the key to engage and disengage the other member to hold them in predetermined position. More specifically, the invention includes the combination of such a device in a merchandise container having a frame including a sill, a keeper thereon, a door hinged to the side of the frame, and a locking bar pivoted on the door and rotatable to enter the keeper, the securing device being mounted on the sill to engage the locking bar when in the keeper.

4 Claims, 6 Drawing Figures



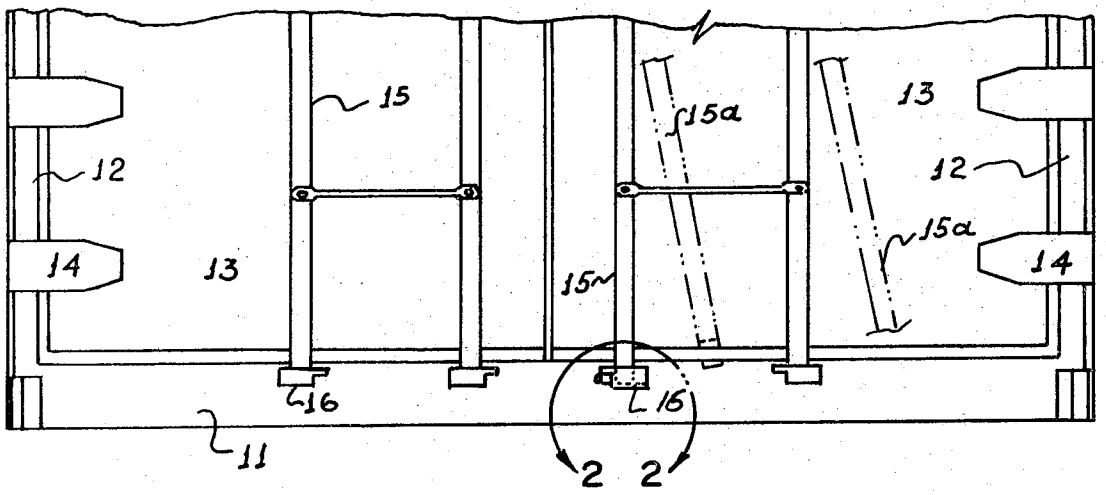


FIG. 1.

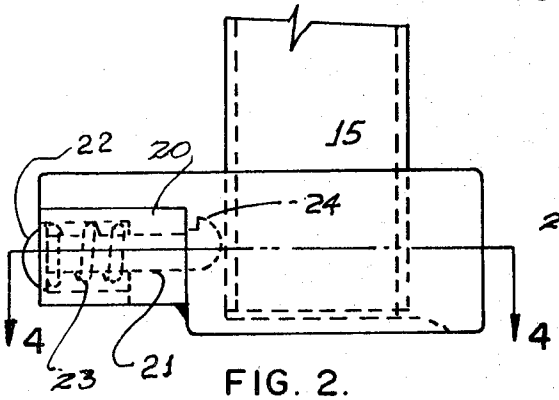


FIG. 2.

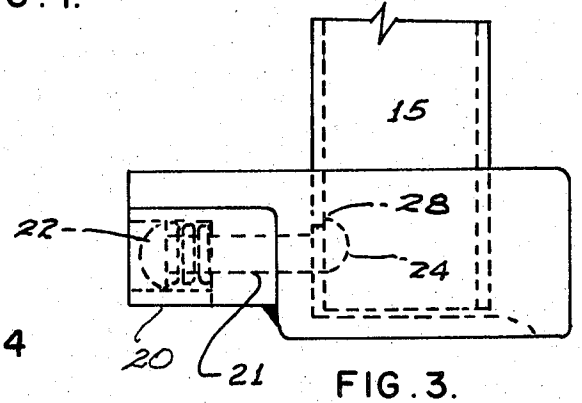


FIG. 3.

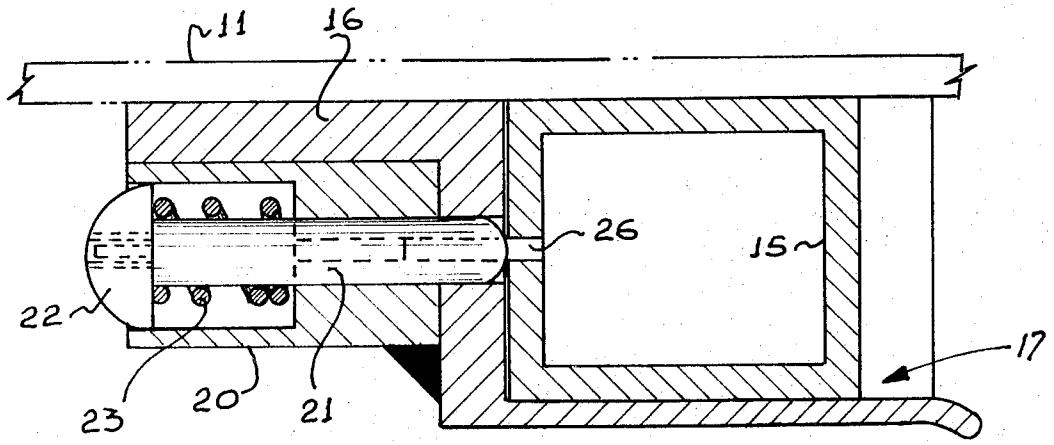


FIG. 4.

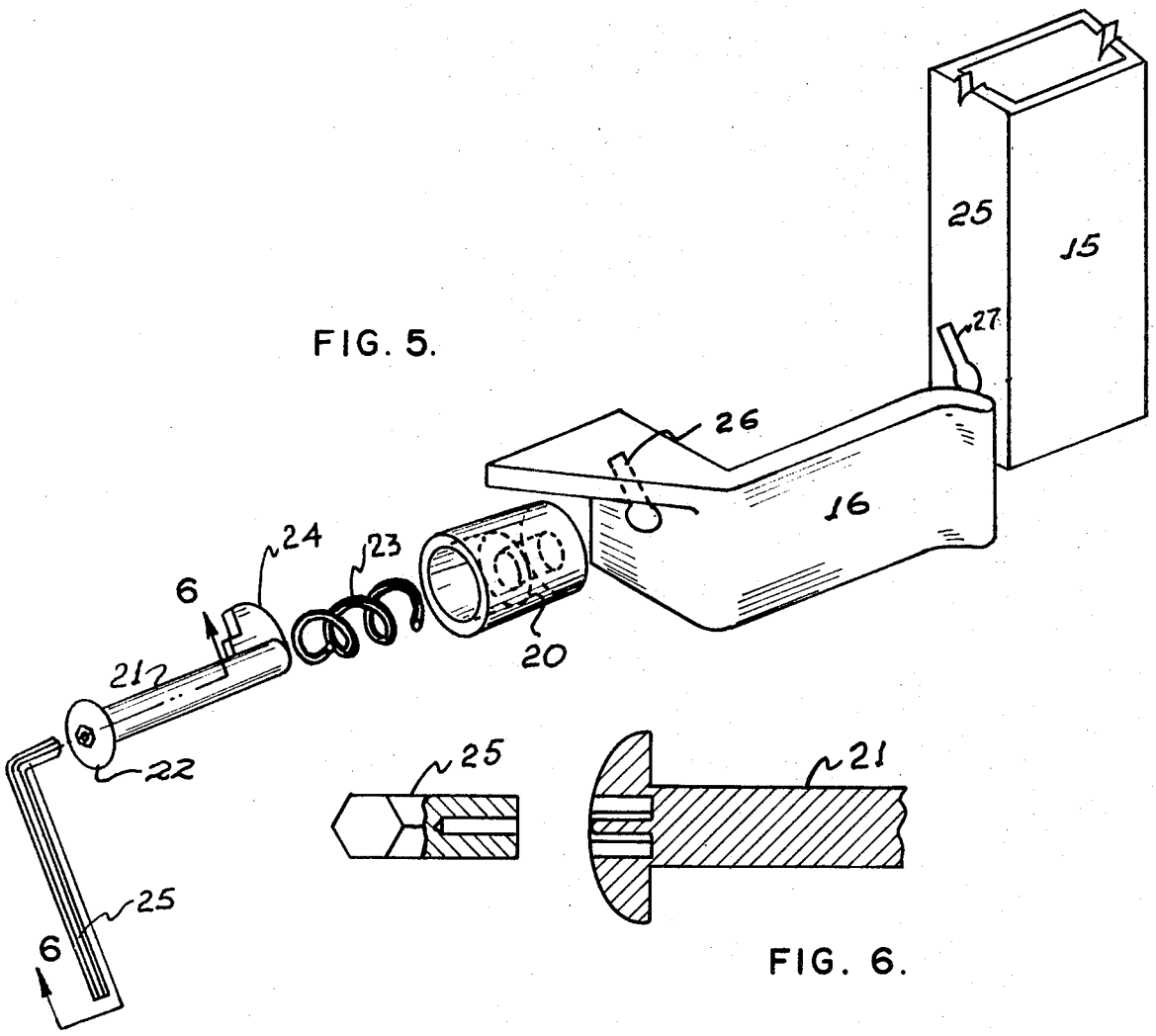


FIG. 5.

FIG. 6.

SECURING DEVICE FOR MOVABLE MEMBERS

SUMMARY OF THE INVENTION

The invention is particularly adaptable for use on railway piggy-back containers or similar containers which include upright doors at one end which swing into contact with each other and are held together by pivoted locking bars engaging keepers on the container body. The bars are connected by a latch having the ordinary wire and lead car seal which is readily broken. The main object of the invention is to provide a simple key-actuated device for locking the doors together more securely and irrespective of the application and breaking of the ordinary wire seal.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view of the lower portion of the rear end of a merchandise container such as is in general use in piggy-back service showing the application of the securing device to a swinging locking bar on the doors.

FIG. 2 is an enlarged elevation of the parts indicated by line 2—2 of FIG. 1 showing the lower end of a door locking bar and a keeper on the container frame to which the improved securing device is applied, but shown in open relation.

FIG. 3 corresponds to FIG. 2 but shows the device engaged.

FIG. 4 is a horizontal section on line 4—4 of FIG. 2 but drawn to a larger scale.

FIG. 5 is an exploded view showing the parts indicated in FIGS. 2, 3 and 4.

FIG. 6 is a section on line 6—6 of FIG. 5.

DETAILED DESCRIPTION

The merchandise container shown in FIG. 1 includes an end sill 11, upright corner posts 12 to which doors 13 are hinged at 14. Locking bars 15 are pivoted on doors 13 to swing between functioning positions shown in FIG. 1 and released positions indicated by dotted lines 15*a*. Such a container and locking bar are shown in U.S. Pat. No. 1,828,912 issued Oct. 27, 1931 and in an application Ser. No. 214,690 filed Jan. 3, 1972.

Keepers 16 are welded to sill 11 and each forms a Z-shaped pocket 17 (FIG. 4) receiving the end of a locking bar 15 when the latter is swung to upright position. An open-end sleeve 20 is welded to each keeper 16. Latch pin 21 is slidably and rotatably mounted in sleeve 20 and has a head 22 at one end engaged by a spring 23 seated in a recess in sleeve 20 and tending to thrust the pin to the left. The opposite end of the pin has a radial fin 24 substantially thinner than the diameter of the pin and projecting laterally from the pin.

When locking bar 15 is swung to bring it into the keeper pocket as shown in FIGS. 1–3, a key 25 (FIG. 5) is inserted through pin head 22 and the pin is rotated to align its fin 24 with slots 26, 27 in the keeper and locking bar, and the pin is pressed axially against the thrust of the spring to insert the right hand end of the pin within the locking bar, and rotate the pin to engage

with the inner face of the locking bar as indicated at 28 (FIG. 3), thus preventing inclination of the locking bar on the door. The key is removable and the door may be opened only by application of a similar key by a workman either at the initial location of the container or at a remote destination.

The device is adapted for ready application for doors in many types of containers. The shape of the pin and its mounting and the structure of the locking member may be varied substantially without departing from the spirit of the invention as expressed in the appended claims.

I claim:

1. In combination, a merchandise container including a frame and a door mounted therein, a keeper on the frame forming a pocket opening parallel to the door when the latter is in close position and having a rear wall extending transversely of the frame, a locking bar movable on said door and parallel thereto into said pocket for abutting engagement with said keeper wall, a latch pin rotatable and slidable in said keeper and having a hook-shaped terminal, said keeper wall and said locking bar having aligned slots adapted to receive said terminal when said bar is in said pocket, said latch pin being insertible through said slots when said pin is in a predetermined angular position in said sleeve and engageable with said locking bar to prevent withdrawal therefrom when rotated from said angular position, and a detachable key fitting in said latch pin for rotating the same.

2. In combination, a merchandise container having a frame with a door, a keeper on said frame with a pocket flange parallel to and spaced from said frame and a rear wall transverse of said frame, a hollow locking bar movable on said door to shift parallel thereto into and out of position behind said keeper flange wherein its surface abuttingly engages said rear wall, and means for securing said locking bar in said keeper comprising an elongated sleeve with one end attached to said keeper, a locking pin slidable lengthwise and rotatable in said sleeve and having a head at its outer end and a lateral fin at its inner end, said pin and fin being insertible through aligned apertures in said keeper wall and a wall of said locking bar and rotatable therein to engage an inner face of said wall, and a removable key for rotating said pin fin into and out of bar-engaging position, and a detachable key fitting in the head of said pin for rotating said pin to register said fin with said apertures.

3. A combination as described in claim 2 in which the latch pin has a head at the end opposite the hook-shaped terminal, there being a spring seated in the keeper with its outer end engaging said head and thrusting the pin out of the locking bar and said terminal and slots are aligned.

4. A combination as described in claim 3 in which the securing pin and spring are assembled with a self-contained sleeve and comprising therewith a self-contained unit applicable to the exterior of the keeper.

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