June 21, 1955 J. M. FALK ET AL 2,711,343

TRUCK DOOR

Filed Sept. 6, 1952 2 Sheets-Sheet 1

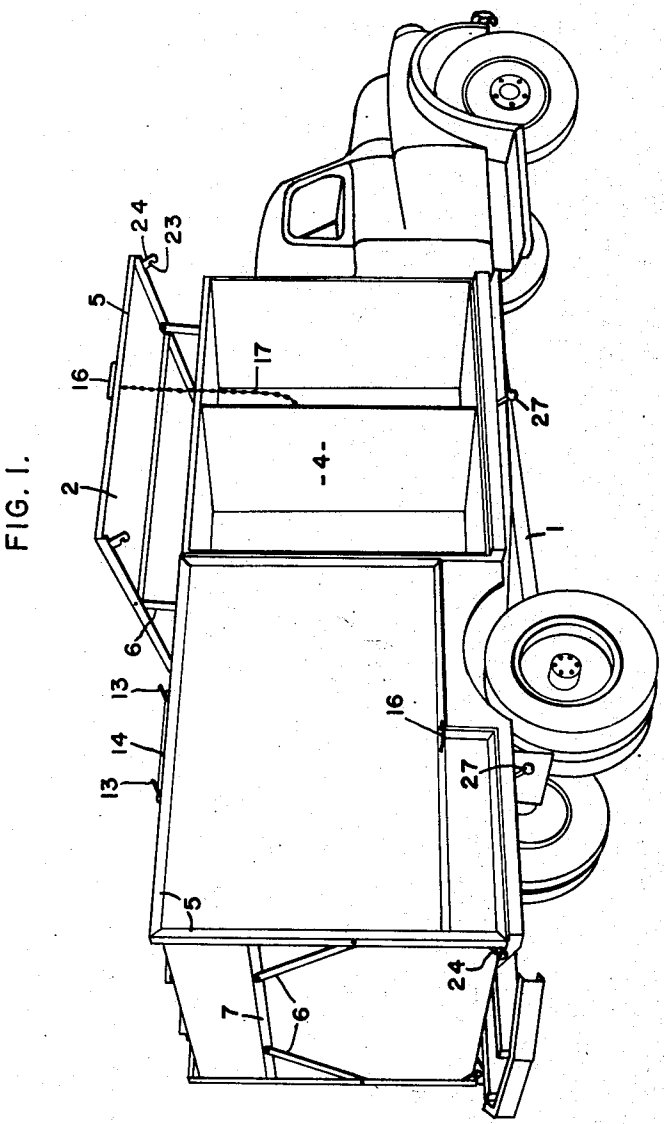


FIG. 1.

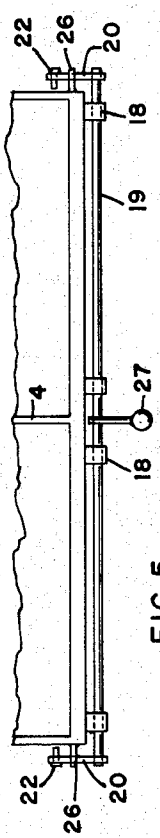


FIG. 5.

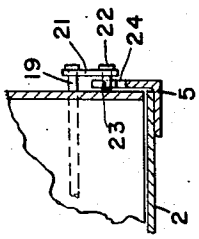


FIG. 4.

Inventors

Joseph M. Falk
Charles T. Falk

By Kenneth M. Thorpe
Attorney

June 21, 1955 J. M. FALK ET AL 2,711,343

TRUCK DOOR

Filed Sept. 6, 1952 2 Sheets-Sheet 2

FIG. 2.

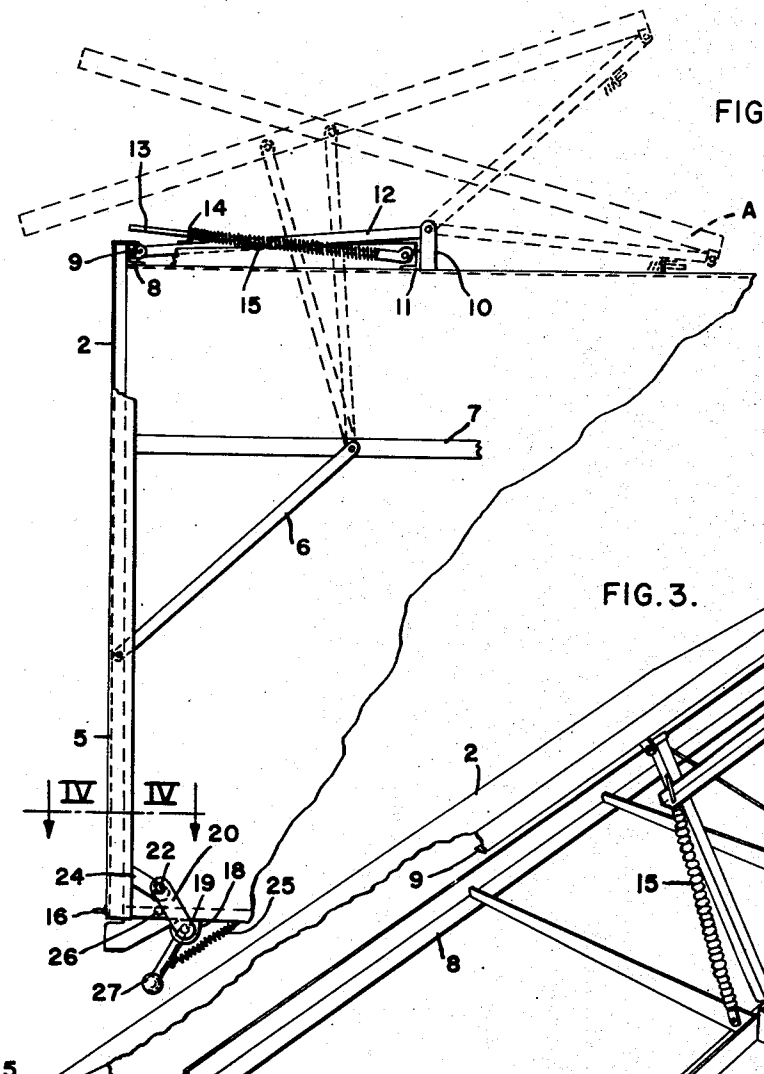


FIG. 3.

Inventors
Joseph M. Falk.
Charles T. Falk,
By Kenneth M. Thorpe
Attorney

United States Patent Office 2,711,343
Patented June 21, 1955

2,711,343

TRUCK DOOR

Joseph M. Falk and Charles T. Falk, Kansas City, Mo.

Application September 6, 1952, Serial No. 308,192
3 Claims. (Cl. 296—44)

This invention relates to vehicle doors and particularly to doors for beverage trucks where the load is to be protected from the weather and guarded against pilferage, the door being of such nature that an entire compartment is uncovered and the door when open is entirely out of the way of traffic or of operations incident to servicing the compartment in loading or unloading operations.

Another object of the invention is to provide a door of this type which can be easily operated from the ground, the door being balanced in such fashion that spring means tends to keep it in open or closed position.

A further object of the invention is to produce a door construction of strong, durable and inexpensive design, in which the operating parts are readily accessible without requiring the dismantling of any part of the truck.

With the general objects named in view and others as will hereinafter appear, the invention consists in certain new and useful features of construction and organization of parts as hereinafter described and claimed; and in order that it may be fully understood, reference is to be had to the accompanying drawing, in which:

Figure 1 is a perspective view of a truck chassis provided with a door involving the invention.

Figure 2 is a fragmental end view of the truck compartment showing the door in closed position in full lines and in partially open and open positions in dotted lines.

Figure 3 is a perspective view of the door in balanced position as it moves between fully open and fully closed relationship to the compartment.

Figure 4 is a section on the line IV—IV of Figure 2 to illustrate the locking mechanism.

Figure 5 is a front view of the door locking mechanism to illustrate parts hidden in the other figures.

Referring now to the drawings in detail, where like reference characters identify corresponding parts in all figures, **1** is a truck chassis equipped with four compartments having doors **2** involving the invention, two of said compartments being accessible from each side of the truck. If desired each compartment can be divided by partitions **4**, left free or otherwise divided as desired.

In order to provide for the overhead mounting of the door above the top or roof when open, each door **2** is provided with edge extensions beyond the top and side edges of the door, these extensions for convenience and to assist in making a weather tight door, preferably comprising angle flanges **5**.

The door pivots comprise a pair of straps or arms **6** respectively pivoted at their opposite ends to the edge extensions of the door **5** and to the end supports or reinforcements **7** for the ends of the compartment.

The front edge of the roof of the compartment is preferably reinforced with a channel **8** or the like, and the top edge of the door has an extension member **9**. Pivoted to the member **9** at one end and to a pair of arms **10** carried by a reinforcement **11** running longitudinally of the roof, are a second pair of door pivot arms **12**.

To assist in swinging the door and to hold same in open or closed position, are a pair of rods **13** pivoted eccentrically of arms **12**, to the roof of the compartment. Said arms have their free ends reciprocating through a channel or abutment member **14** connecting the arms together. Carried by said rods **13** are expansion springs **15** which are compressed between the abutment and the pivot to pass center as the door swings between open and closed positions.

In opening the door the operator grasps the handle **16** and throws the door upwardly, the balance of the door being such that this operation will compress the springs past center and the door will move to fully open position above and substantially paralleling the roof. When the door is to be closed it is pulled downwardly by chain **17** until the springs pass center.

In order to lock the door in closed position, a series of bracket arms **18** project downwardly from the bottom of the compartment, and act as bearings for a rod **19** running longitudinally of the truck body. Pinned to the ends of said rod are a pair of lock arms **20** carrying lock pins **22** projecting inwardly as shown in Figure 5. The pins are adapted to engage notches **23** in latch plates **24** carried by the door flanges **5**. The latches are urged toward locking position by a spring **25** which normally holds said latches against the stop **26**. When the door is to be opened the operator grasps the handle **27** which is pinned to shaft rod **19** and by pulling outwardly overcomes the spring **25** and unlatches the door.

From the above description and drawings it will be apparent that we have produced a construction embodying all of the features of advantage set forth as desirable; and while we have described and illustrated the preferred embodiment we reserve the right to all changes within the spirit and scope of the appended claims.

We claim:

1. In a compartment having end supports and a roof, of a door for closing the side of said compartment and having at least a portion of its top and side edges extending above the roof and beyond the end supports, a pair of arms having their opposite ends respectively pivoted to the door side extensions and to the compartment end supports, a roof pivot arm having its opposite ends pivoted to the top door extension and to the roof and having an abutment, a guide arm pivoted to the roof and reciprocating through the abutment, and an expansion spring on the rod and compressed between the guide arm pivot and abutment.

2. In a compartment having end supports and a roof, of a door for closing the side of said compartment and having at least a portion of its top and side edges extending above the roof and beyond the end supports, a pair of arms having their opposite ends respectively pivoted to the door side extensions and to the compartment end supports, a pair of roof pivot arms having their opposite ends respectively pivoted to the top door extension and to the roof, a cross bar connecting said arms, a guide arm pivoted to the roof and reciprocating through the cross bar, and an expansion spring carried by the rod and compressed between the cross bar and rod pivot.

3. In a compartment having end supports and a roof, of a door for closing the side of said compartment, a pair of arms having their opposite ends respectively pivoted to the exterior of the end supports and to the exterior side edges of the door, a second pair of arms having their opposite ends respectively pivoted to the exterior edge of the top of the door and to the exterior of the roof, spring abutments, one carried by each of said second pair of arms and another mounted in pivoted relation to the roof adjacent the roof pivots of each of said second pair of arms, and a spring compressed between said abutments, the arcuate swinging movement of the second pair of arms shifting the arm abutment past center in relation to the roof abutment to urge the door to open and closed positions respectively.

References Cited in the file of this patent

UNITED STATES PATENTS

1,855,860	Mackinzie	Apr. 26, 1932
1,967,346	Barnby	July 24, 1934
2,551,054	Sanmori	May 1, 1951

FOREIGN PATENTS

475,464	Canada	July 24, 1951