April 6, 1926. 1,579,543

H. Y. KING

VENT

Filed March 27, 1924

Fig. 1.

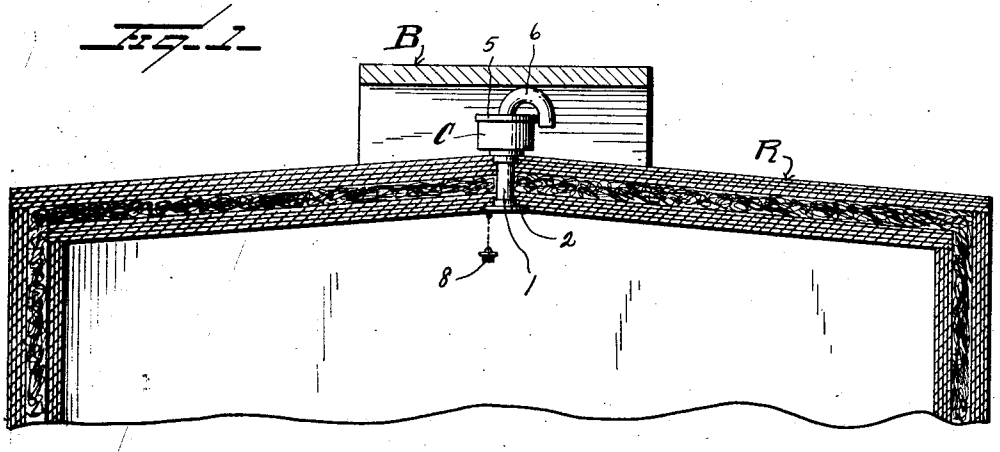


Fig. 2.

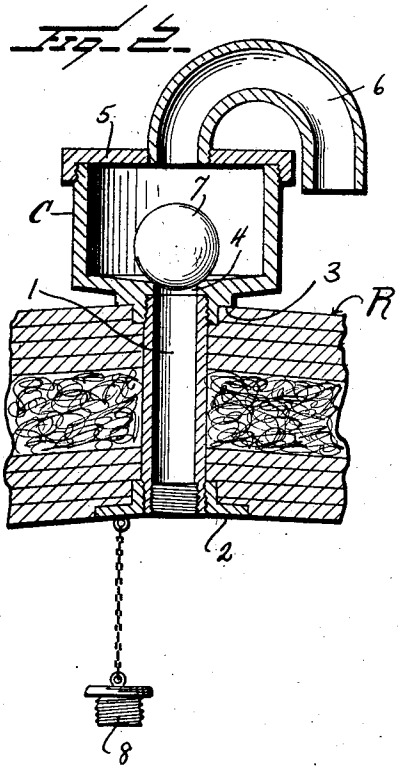
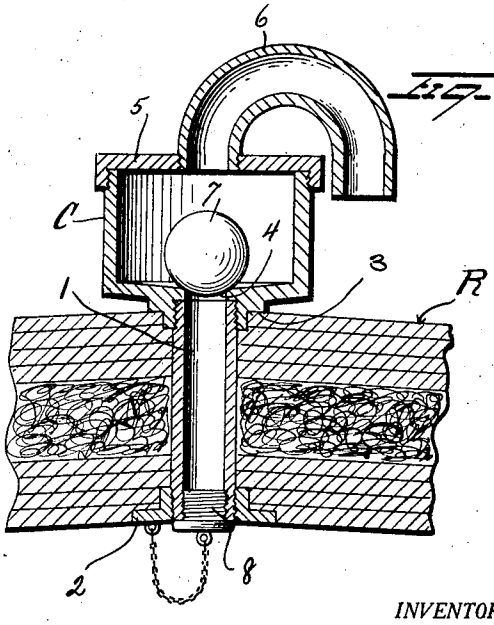


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY Y. KING, OF BENTONVILLE, ARKANSAS.

VENT.

Application filed March 27, 1924. Serial No. 702,444.

To all whom it may concern:

Be it known that I, HARRY Y. KING, a citizen of the United States, residing at Bentonville, in the county of Benton and State of Arkansas, have invented certain new and useful Improvements in Vents, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in vents and has relation more particularly to a device of this general character especially designed and adapted for use in connection with a refrigerator car or kindred rolling stock, and it is an object of the invention to provide a novel and improved device of this general character which automatically operates to permit the escape of gases and vitiated air within a substantially sealed body.

Another object of the invention is to provide a novel and improved device of this general character adapted to be disposed through the roof or top wall of a refrigerator car or the like and preferably at the high point thereof together with a freely moving valve for normally closing the flow through said vent, said valve however being intermittently moved into open position incident to the vibrations of travel.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved vent whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view partly in section and partly in elevation illustrating a vent constructed in accordance with an embodiment of my invention and in applied position;

Figure 2 is an enlarged sectional view taken through my improved vent as herein disclosed, the adjacent portion of a car roof or the like being shown in fragment and the sealing member unapplied; and

Figure 3 is a view similar to Figure 2 showing the sealing member applied.

As disclosed in the accompanying drawings, R denotes the roof of a refrigerator car and which has disposed above the ridge of said roof the running board B as is well-known.

My improved vent comprises a tubular member or sleeve 1 adapted to be disposed through the roof R and preferably at the high point or ridge thereof, the inner or inserted end portion of the member or sleeve 1 having threaded therearound the flanged collar 2 providing means whereby the inner or inserted end of said member or sleeve 1 is effectively secured to the inner surface of the roof and in an airtight manner.

Externally threaded upon the outer end portion of the member or sleeve 1 is a casing C, said casing being provided with a shoulder 3 for contact with the outer face of the roof R whereby the casing C when applied provides additional means for effectively maintaining the member or sleeve 1 in applied position and also to create an airtight joint so that passage of gas or air is prevented except directly through the member or sleeve 1.

The casing C is of desired dimensions and configuration and has the inner face of its bottom concaved with a substantially central opening 4 directly in communication with the bore of the member or sleeve 1. The casing C as herein disclosed, is provided with a removable top 5, said top carrying a gooseneck 6, the outer or eduction end of which terminating in close proximity to the casing C below the upper end thereof.

Freely movable within the casing C is the valve member 7 herein disclosed as spherical, the concave face of the bottom of the casing C causing said valve member 7 to automatically assume a position to close the flow through the member or sleeve 1.

As is particularly illustrated in Figure 1 it is to be noted that the casing C and the gooseneck 6 are of such dimensions as to permit the same to be positioned below the running board B so that such casing and gooseneck will offer no hinderance or obstruction to a trainman or otherwise offer interference.

My improved vent is particularly adapted for use in connection with a refrigerator car when the same is iced and provides means whereby vitiated air or gases rising from the load may readily escape to the atmosphere whereby a more effective preservation of the load is permitted. By permit-

ting the gases or vitiated air to escape, it is assured that the entire interior of the car will have a maximum refrigeration as it is well-known that the warm air or gases will rise and by permitting such air or gases to escape the same will be readily replaced by the cold air.

The valve 7 as hereinbefore stated, is normally in its closed position but, when the car is in transit the resultant vibrations or transit shocks will cause the valve 7 at intermittent periods to be thrown into open position and during which periods the vitiated air or gases will escape.

When it is desired to positively close the flow through the tubular member or sleeve 1, a plug 8 or the like is engaged with an end portion of the member or sleeve 1 and preferably the inner or inserted end, as is particularly illustrated in Figure 3 of the accompanying drawings.

By the use of my improved vent the load within a refrigerator car and particularly in connection with berries and fruits, may be materially increased over the load which is now generally permitted yet with the increased load a more effective preservation is assured.

From the foregoing description it is thought to be obvious that a vent constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. In combination with the roof of a refrigerator car, a tubular member disposed through such roof, a flanged collar engaged with the inserted end portion of the tubular member to provide means to secure the member to the inner surface of the roof, a casing threaded upon the outer end portion of the tubular member and provided with a shoulder for contact with the outer surface of the roof to provide additional means for maintaining the tubular member in applied position, said tubular member being in communication with the casing, a freely movable valve within the casing and normally closing the flow through the tubular member but readily moving into open position incident to vibration of the car in transit, and a goose neck in communication with the casing and with the atmosphere.

2. In combination with the roof of a refrigerator car, a tubular member disposed through such roof, a flanged collar engaged with the inserted end portion of the tubular member to provide means to secure the member to the inner surface of the roof, a casing threaded upon the outer end portion of the tubular member and provided with a shoulder for contact with the outer surface of the roof to provide additional means for maintaining the tubular member in applied position, said tubular member being in communication with the casing, a freely movable valve within the casing and normally closing the flow through the tubular member but readily moving into open position incident to vibration of the car in transit, a goose neck in communication with the casing and with the atmosphere, and means coacting with the inserted end portion of the tubular member for closing flow therethrough.

3. In combination with the roof of a refrigerator car, a tubular member disposed through such roof, a flanged collar engaged with the inserted end portion of the tubular member to provide means to secure the member to the inner surface of the roof, a casing threaded upon the outer end portion of the tubular member and provided with a shoulder for contact with the outer surface of the roof to provide additional means for maintaining the tubular member in applied position, said tubular member being in communication with the casing, a freely movable valve within the casing and normally closing the flow through the tubular member but readily moving into open position incident to vibration of the car in transit, a goose neck in communication with the casing and with the atmosphere, and means coacting with the inserted end portion of the tubular member for closing flow therethrough, said goose neck communicating with the casing through the top at a point opposed to the tubular member.

In testimony whereof I hereunto affix my signature.

HARRY Y. KING.