

(No Model.)

2 Sheets—Sheet 1.

R. McCOY.
CAR.

No. 586,450.

Patented July 13, 1897.

FIG. 1.

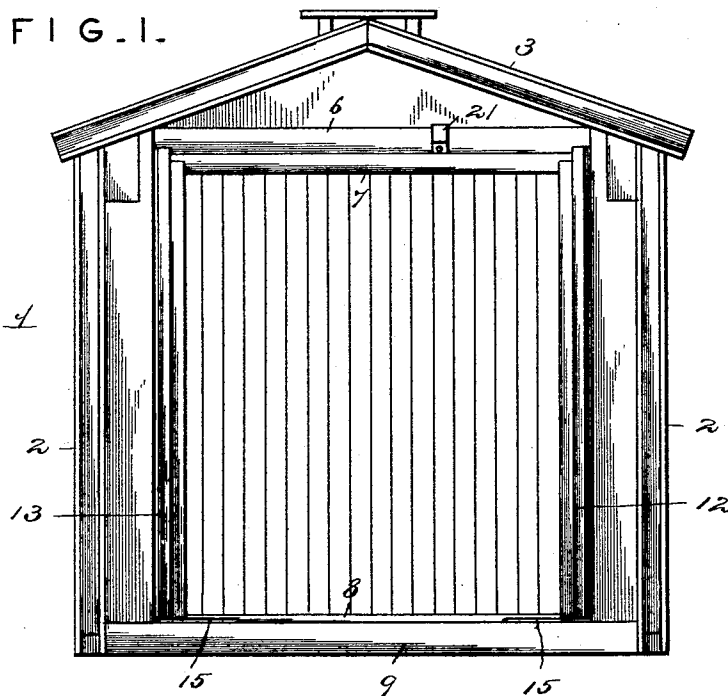
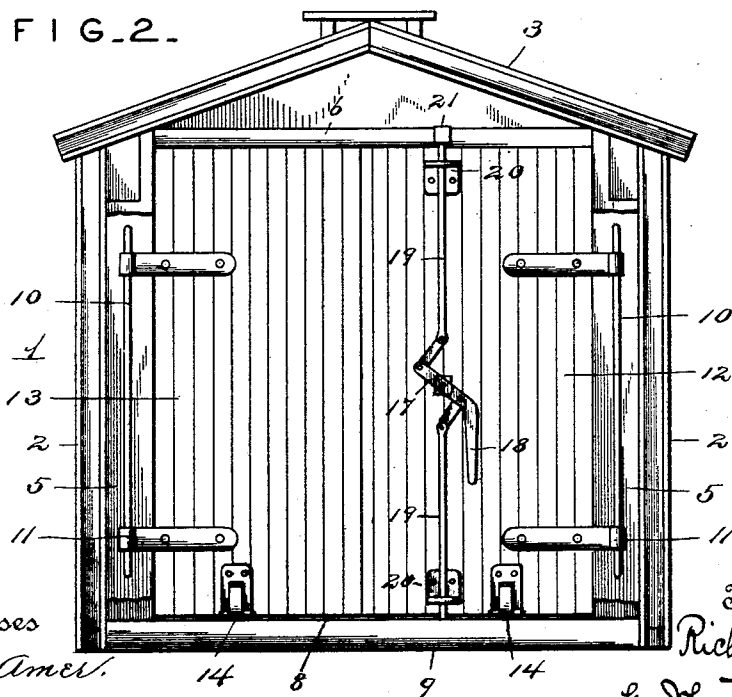


FIG. 2.



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FIG. 3.

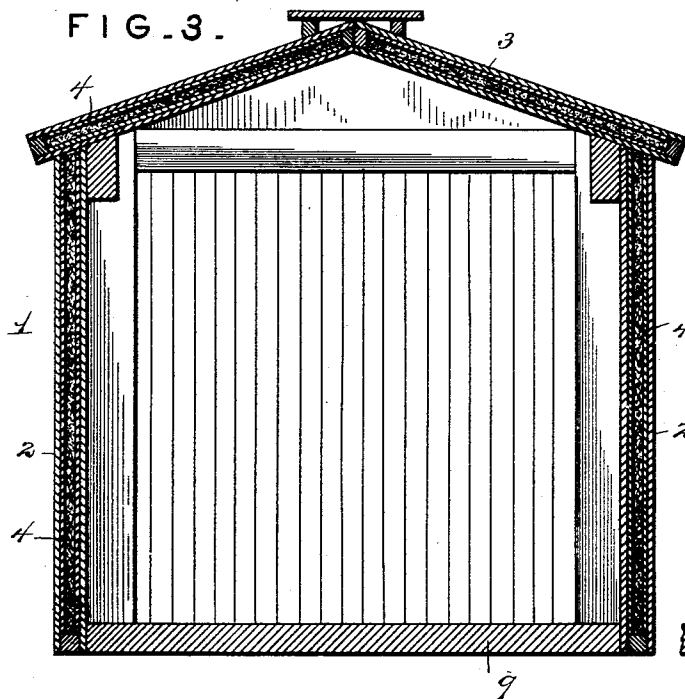


FIG. 5.

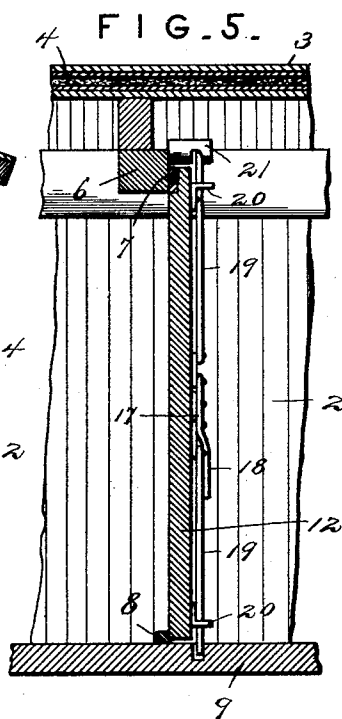


FIG. 4.

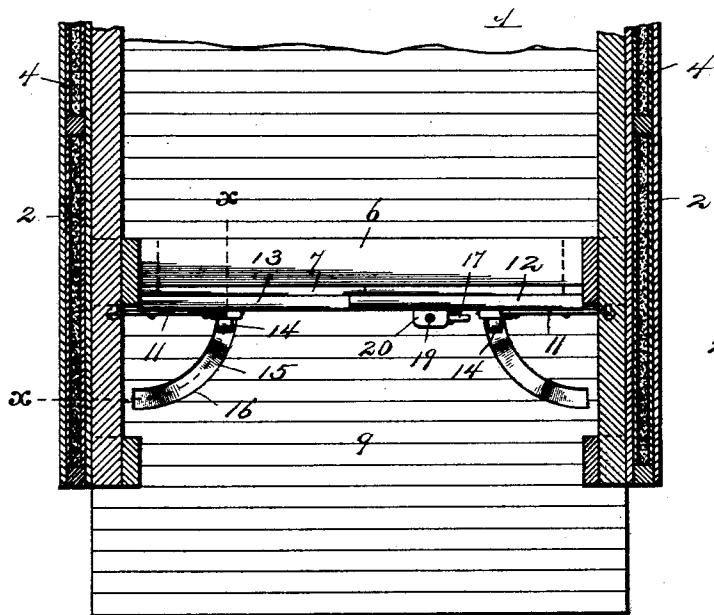
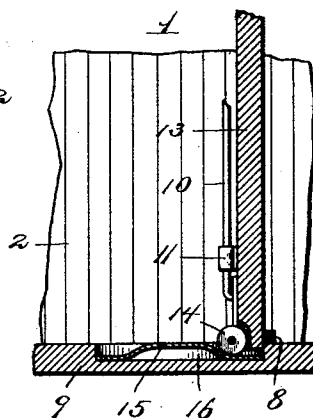


FIG. 6.



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UNITED STATES PATENT OFFICE.

RICHARD MCCOY, OF RIVERTON, VIRGINIA.

CAR.

SPECIFICATION forming part of Letters Patent No. 586,450, dated July 13, 1897.

Application filed July 15, 1896. Serial No. 599,286. (No model.)

To all whom it may concern:

Be it known that I, RICHARD MCCOY, a citizen of the United States, residing at Riverton, in the county of Warren and State of Virginia, have invented certain new and useful Improvements in Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in shipping-cars, the object of the same being to produce a car which when closed is impervious to air or moisture.

It is a well-known fact that quicklime or calcium oxid and calcium carbid, from which acetylenegase is manufactured, deteriorate by contact with the air, both because of the escape of the gas from the material and because of the chemical action which takes place by the affinity which these materials have for the moisture and carbonic acid contained in the air. The usual method of transporting calcium carbid is in hermetically-sealed metallic cylinders, and the usual method of transporting calcium oxid is in barrels. This entails great expense for the cylinders and barrels, and, furthermore, a greater amount of room in the car is taken up than would be required were they shipped in bulk.

My improved car is especially designed for the transportation of such materials as those just referred to; and it consists of a car closed at all points except at its ends whose walls and roof are of double-thickness material with a packing of wood fiber, cow-hair, or other similar material between the layers thereof and a lining which is water, air, and acid proof. At each end of the car a platform is provided upon which is a segmental track having a depression at its inner end upon which move rollers mounted in brackets upon the lower ends of doors which are free to swing upon suitable hinges, permitting a slight upward- and downward movement thereof. The edges of the doors are covered with strips of rubber or other suitable material, and the floor and upper ledge of the car are provided with similar strips of rubber in order that a perfect joint may be made between the doors and the car when the former are in their closed position. Suitable fastening devices are also pro-

vided on the outside of one of the doors, which, when locked, serve to hold said doors in close contact with the frame of the car. 55

The invention also consists in other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 represents an end view of a car constructed according to my invention with the doors shown in their open position. Fig. 2 is a similar view with the doors in their closed position. Fig. 3 is a cross-section 65 through the same. Fig. 4 is a horizontal section taken at a point just above the door of the car. Fig. 5 is a vertical section through one of the doors, the same being taken through the locking-bolt thereof. Fig. 6 is a section 70 on the line *xx* of Fig. 4, the same being taken through the segmental track upon which the doors swing.

Like reference-numerals indicate like parts in the different views. 75

The car 1 is of the usual shape, the sides 2 and the roof 3 thereof being constructed of two layers of material, with an interposed packing between the layers of wood fiber, cow-hair, or other similar material. They are 80 made with tight joints, and the inner surface thereof is covered with a sheathing 4, of paper or other suitable material which is air, moisture, and acid proof. At each end of the car a door-frame is formed of two side uprights 85 5 5 and a cross-beam 6, connecting the upper ends of said uprights. Secured to the outer surface of the uprights 5 and the cross-beams 6 are strips 7 7 of rubber or other suitable material, and a similar strip 8 extends along 90 the floor 9 of the car between the uprights 5, the said strips 7 and 8 serving as cushions. Secured to the front faces of each of the uprights 5 5 are vertically-disposed rods 10 10, upon which are mounted upon suitable 95 hinges 11 the doors 12 13, respectively. This means of mounting the doors will, as will be seen, permit the same to swing on their bearings and also to move up or down within certain limits. The inner surfaces of the doors 100 12 and 13 are rabbeted along their edges, so that they will fit within the space between the uprights 5 and cross-beam 6, with edges projecting along the outer surfaces thereof.

I may provide, if I choose, on the inner surface of said doors, around the outer edges thereof, strips of rubber or other suitable material, so as to form a perfectly tight joint between said doors and the uprights 5 and cross-beams 6 when said doors are in their closed positions. Mounted in suitable brackets at the lower ends of each of the doors are antifriction-rollers 14 14, which rest and roll upon segmental tracks 15 on the floor 9 of the car. The said tracks 15 are held within grooves 16, so that throughout a portion of their length they lie flush with the top surface of the floor. The inner ends of said grooves, however, are depressed, as shown, so that when the doors 12 and 13 are thrown inwardly the rollers 15 will drop within said depressions, lowering the doors and bringing the lower edges thereof in close contact with the strip 8, extending between the uprights 6 and secured to the floor of the car, also permitting the rabbeted portions of the doors to pass beneath the cross-beam 6.

On the outside of the door 12 is mounted a fastening device. This consists of a bell-crank lever 17, fulcrumed at a point near the longitudinal center of said door, having an operating-handle 18 at one end thereof. Pivotaly connected to the outer ends of each of the arms of said bell-crank lever are locking-bolts 19, which extend upwardly and downwardly therefrom and pass through suitable guides 20 at points adjacent to the upper and lower ends, respectively, of said door. The outer ends of the locking-bolts 19 are beveled or wedge-shaped, as clearly shown, and are adapted to fit within openings or recesses in the floor 9 or in a lug 21, secured to the cross-beam 6. By this construction it will be seen that by moving the operating-handle 18 in one direction or the other both of the locking-bolts 19 will be withdrawn or forced outwardly into the recesses in which they are respectively adapted to fit. By reason of the beveled or inclined ends of said locking-bolts the further they are forced outwardly the closer they will force the doors 12 and 13 into contact with the door-frame of the car.

From the foregoing description it will be seen that I have devised a simple and effective car for shipping quicklime or calcium carbide which will prevent the escape of any gases therefrom and also keep said material from contact with the air. The doors can be readily opened or closed one at a time when desired for the purpose of introducing or removing the material from the car in bulk, and when closed a perfectly tight joint is made between the doors and the frame thereof.

Instead of the fastening device for the doors which has been described it is obvious that I may substitute any other form of fastening device which will tend to hold the doors in close contact with the door-frame whatever the pressure which is applied thereto. Such a form of fastening as is now used upon refrigerators, wherein a cam-shaped locking-

disk is employed in connection with a dog upon the stationary part of the door-frame, may be mentioned as one of the substitutes I may employ.

Throughout this specification my invention has been described as an improvement in shipping-cars. While the same is especially adapted to this use, it is also adapted to be used in connection with bins or other stationary receptacles for containing quicklime, calcium carbide, and other like substances.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A shipping-car or other receptacle whose sides and roof are made of two layers with interposed packing between the layers, of wood fiber, cow-hair, or other suitable material, a sheathing upon the inner surface of said car which is air, water and acid proof, doors at each end of the car, and means for forming a tight joint between said doors and said car.

2. In a shipping-car or other receptacle for the purpose described, the combination with the main body part thereof, of a door-frame made up of a pair of uprights and a cross-beam connecting the same at their upper ends, strips of rubber or other suitable material secured to the front faces of said uprights, said cross-beam and the floor of the car, vertically-disposed rods secured to said uprights, doors hinged upon said rods whereby a sliding and reciprocatory movement is permitted, antifriction-rollers upon the lower ends of said doors, segmental tracks in the floor of said car upon which said rollers move, the inner ends of said tracks being depressed, and a locking device for said doors, substantially as and for the purpose described.

3. In a shipping-car or other receptacle for the purpose described, the combination with the main body part thereof, of a door-frame, made up of a pair of uprights and a cross-beam connecting the same at their upper ends, strips of rubber or other suitable material secured to the front faces of said uprights, said cross-beam and the floor of the car, vertically-disposed rods secured to said uprights, doors hinged upon said rods, whereby a sliding and reciprocatory movement is permitted, said doors having rabbeted inner surfaces which are adapted to fit between said uprights and said cross-beam when the doors are in their closed position, antifriction-rollers upon the lower ends of said doors fitting within segmental grooves in the floor of the car which are depressed at their inner ends, and a locking device for said doors, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

RICHARD MCCOY.

Witnesses:

LOUIS G. RANDALL,
ALLEN W. MALLERY.