A. H. SMITH.

LADING CONTAINER.

APPLICATION FILED APR. 28, 1921.

1,407,595. Patented Feb. 21, 1922.

3 SHEETS—SHEET 1.

Fig. 1.

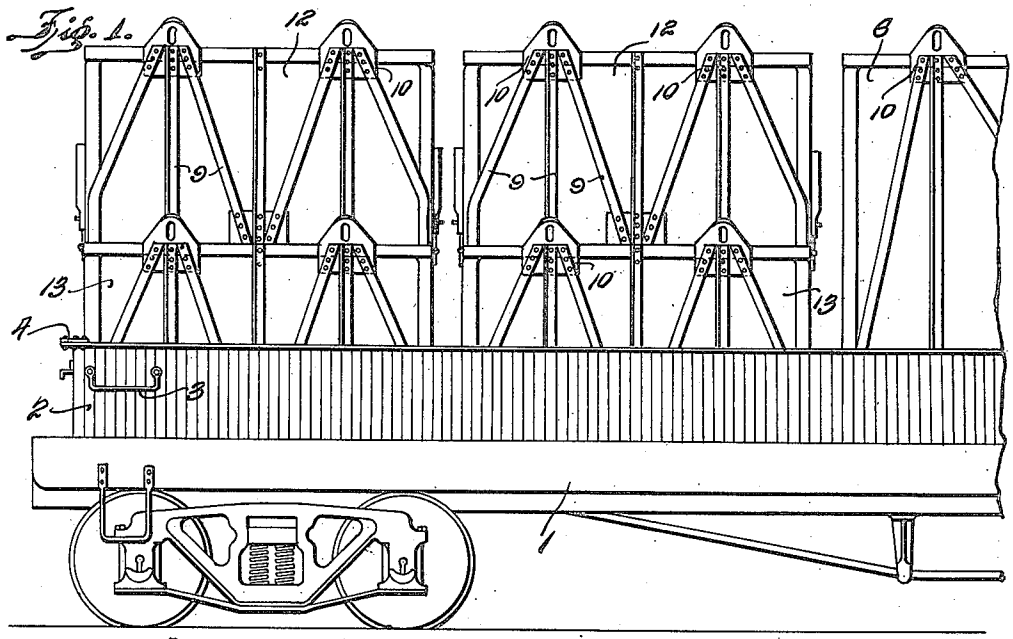

Fig. 2.

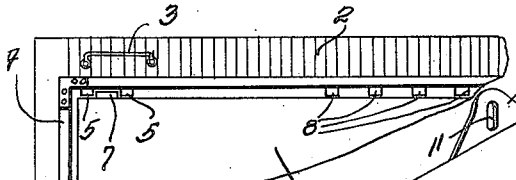

Fig. 3.

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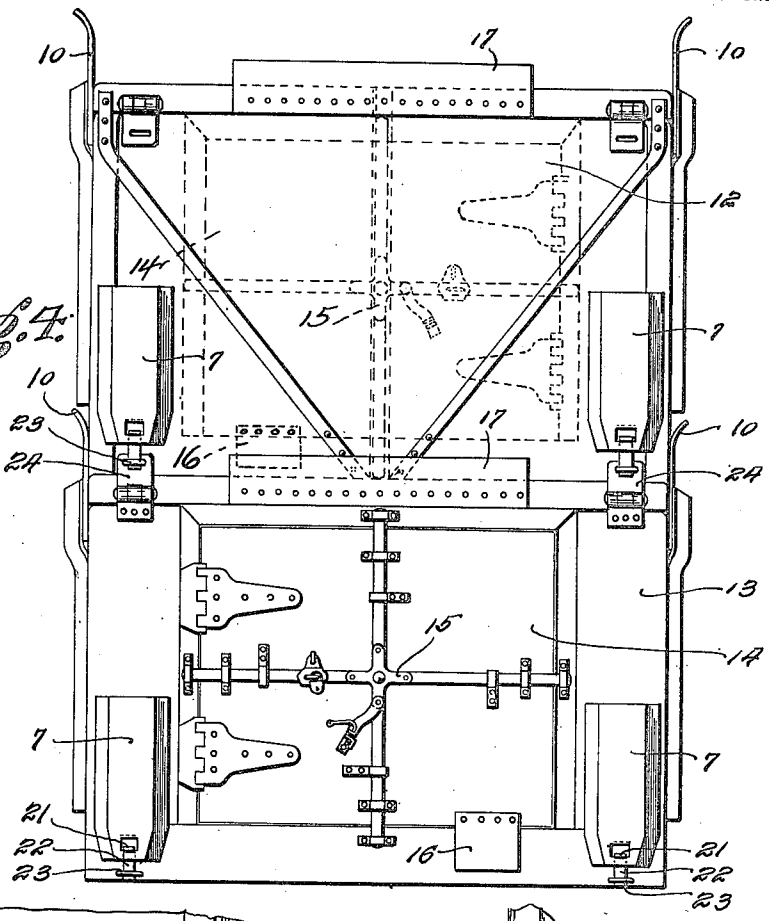
3 SHEETS—SHEET 2.

Fig. 4.



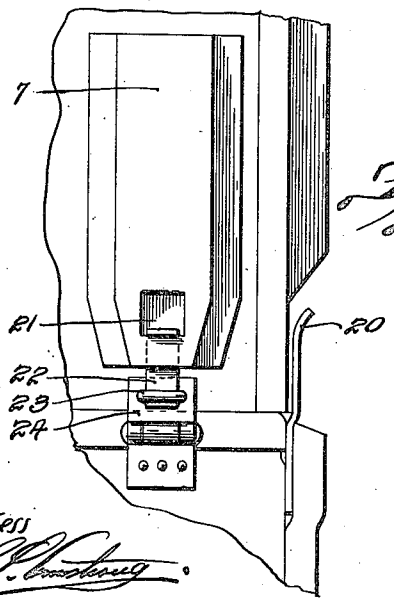


Fig. 5.

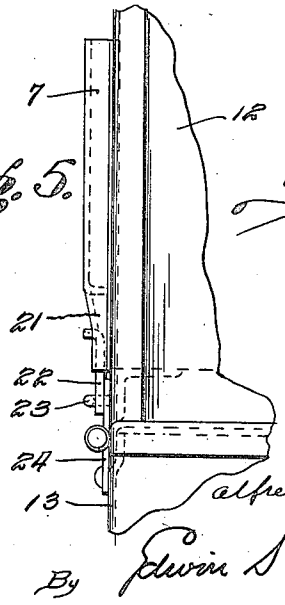


Fig. 6.

Witness

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3 SHEETS—SHEET 3.

Fig. 7.

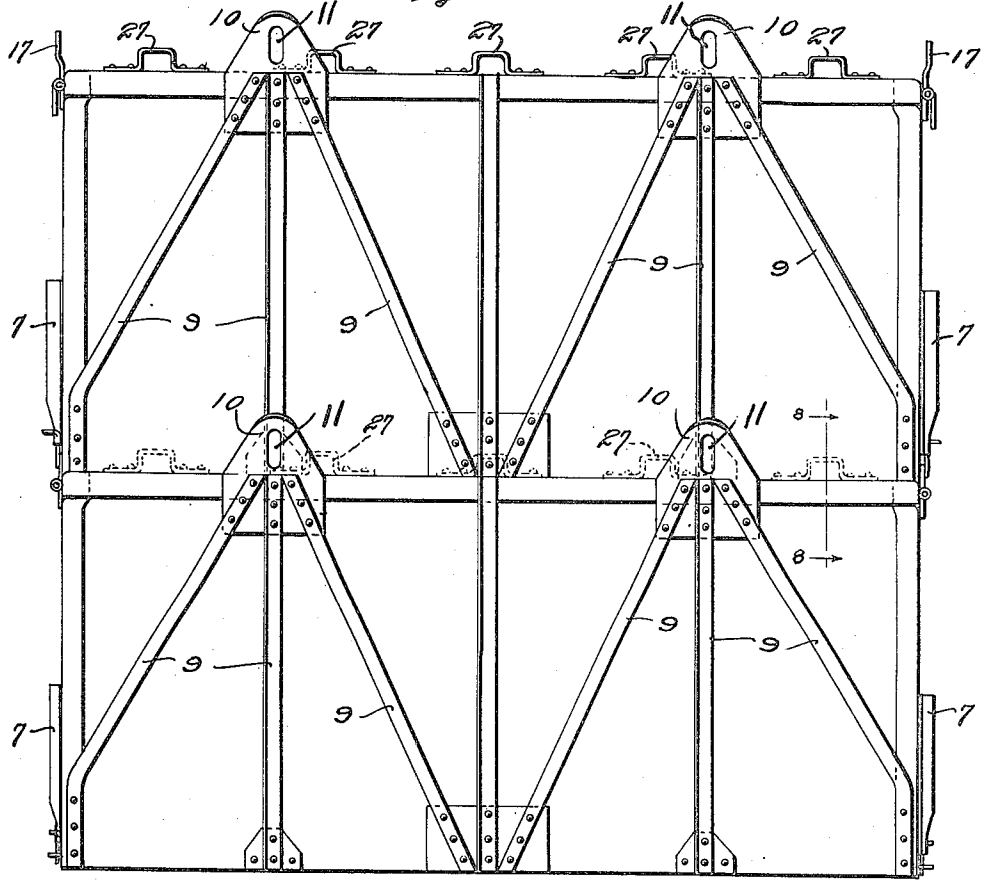

Fig. 8

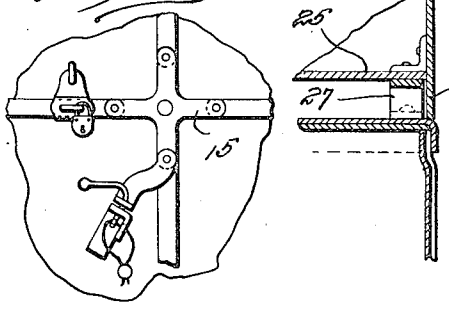

Fig. 9.

Witness

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UNITED STATES PATENT OFFICE.

ALFRED H. SMITH, OF CHAPPAQUA, NEW YORK.

LADING CONTAINER.

1,407,595. Specification of Letters Patent. Patented Feb. 21, 1922.

Application filed April 28, 1921. Serial No. 465,345.

To all whom it may concern:

Be it known that I, ALFRED H. SMITH, a citizen of the United States, residing at Chappaqua, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Lading Containers, of which the following is a specification.

It has been found that approximately 80% of freight way billing on railroads is due to less than carload lots and it has also been found that a large majority of the thefts of goods shipped are from these less than carload lots. This has led to investigation as to the handling of less than carload lots, which investigation has resulted in the adoption and the successful operation of containers in which less than carload lots may be placed by the consignor at his factory or store and the container handled as a unit from that moment until it is delivered to the consignee thereby very materially cutting down the expense of way billing and practically eliminating theft, all of which has resulted in the financial benefit to the railroads, as well as material convenience to the shippers and consignees.

The object of my invention is to construct such containers in multiples so that varied sizes of containers may be uniformly and securely placed on a railroad car and securely anchored in position on the car against shifting, and also so arranged that the container doors cannot be opened while the containers are on the car; and with these and other objects in view my invention consists of the parts and combination of parts as will be hereinafter more fully set forth.

In the drawings

Figure 1 is a side elevation of a car on which are mounted nested compartments embodying my invention.

Figure 2 is a fragmentary top plan view of a corner of the car.

Figure 3 is a perspective view looking down on one of the containers, the container being broken away.

Figure 4 is a front elevation of nested or superposed containers removed from the car.

Figure 5 is an enlarged detail view showing the locking mechanism between the containers.

Figure 6 is an enlarged detail view at right angles to Figure 5.

Figure 7 is a side elevation of superposed containers.

Figure 8 is an enlarged detail view of locking mechanism.

Figure 9 is a detail sectional view on the line 8—8, Figure 7, looking in the direction of the arrows.

Reference numeral 1 designates a car of approved construction, which may be provided with sloping side walls 2, the side walls being provided with suitable hand holds 3. At the top of the side walls is a suitable coping or plate 4, flat throughout the length of the car, said coping extending around on the ends of the car.

The car is provided with guide ways 5, which are adapted to center the containers 6, and complementary guide 7 being arranged on the containers to fit between the guides 5. Intermediate the groups of guides 5 on the side of the car are arranged suitable spacing elements 8 which sustain the compartment from flexing at its center portion under stress of service conditions while the car is in transit. The containers are rigidified by suitable rigidifying elements 9, which extend from the bottom to the top of the containers and are riveted to the gusset plate 10, which plate is provided with perforation 11 adapted to be engaged by a crane, whereby the containers may be lifted on or unloaded from the car.

In making the containers in multiples it is necessary to provide some means whereby a superposed container may be securely locked to the lower container against displacement and whereby the two containers may, if desired, be lifted on to or from the car as a unit, and for the purpose of illustrating my invention I have shown certain constructions in carrying forward my invention which I will now describe.

The smaller units or compartments 12 and 13 are of the same construction and therefore the description of one unit will suffice.

Referring to the unit or compartment 13, which is composed of top, bottom, side and end walls, it will be seen that I provide each unit with a door 14, having a suitable locking mechanism 15. Each door is provided with a stop 16 riveted to the lower edge portion of the door 14, as clearly illustrated in the drawings.

Each compartment is provided with a pair of vertically disposed abutments 17, which extend upwardly from the top edges of the ends of the compartments.

The guiding elements 7 which cooperate

with the guide members 5 of the car in holding the compartments against shifting, while in transit, may be of any desired construction and are each provided at its lower end with a slot 21 in which the head of the bolt 22 is adapted to move, said bolt 22 being threaded through the staple 23, which staple is secured to one of the walls of the container immediately below the guide element 7.

A suitable hasp 24 is hinged to one wall of the container in vertical alignment with the bolt 22 so that when the compartment 12 is superposed on the compartment 13 the bolt 22 is elevated and the hasp 24 fitted over the staple 23 whereupon the bolt 22 is slipped down through the staple 23 and engages and locks the hasp of the container 13 to the staple of the container 12, as clearly shown in the drawing, whereby two superposed containers are securely locked to each other and may be removed from or loaded on to a car as a unit, the crane engaging the plates 10 of the uppermost compartment, as will be readily understood.

When the lowermost container is loaded on the car the side wall of the car functions as an abutment which prevents the opening of the door of the lowermost compartment when it is loaded on the car. When the uppermost compartment 12 is loaded on the lowermost compartment 13, the stops 16 of the door project below the upper edge of one of the abutments 17 whereby it is impossible to open the door of the uppermost compartment when it is in position on the lowermost compartment.

The abutments 17 and the lifting plates 10 project a material distance above the tops of the containers so that when the compartment 12 is loaded on top of the compartment 13 the compartment 12 is nested between the plates 10 on the two sides of the container and the abutments 17 of the ends of the container so that the superposed container is very securely held against shifting relatively to the lowermost container.

The walls of the compartments preferably extend below the floor 25 of the compartment as at 26, and in order to give support to the superposed compartment when in position I provide the compartment with supports 27 whereby the floor of the compartment is properly supported when loaded on the car.

What I claim is:

1. The combination with a car, of a plurality of separate freight compartments detachably mounted thereon, and interlocking members on the walls of the car and compartments respectively, whereby each compartment is independently and rigidly anchored on the car and whereby each compartment may be removed from the car as a unit without impairing the stability of the other compartments or of the car, each compartment having a door which cannot be opened while the compartment is on the car, an abutment extending above the top of each compartment, a plurality of compartments superposed on the first named compartments and also having doors, a stop depending from each door which is positioned back of said abutments whereby the doors of the superposed compartments cannot be opened while on the car, and a locking device locking the upper and lower compartments together.

2. The combination with a car, of a plurality of separate freight compartments mounted thereon and secured thereto, a plurality of separate freight compartments superposed on the first named compartments, locking means securing the upper and lower compartments together, whereby a lower and a superposed compartment may be removed as a unit from the car and whereby upon releasing the locking means each compartment may be removed separately.

3. The combination with a car, of a plurality of separate freight containers mounted thereon and secured thereto, a plurality of separate freight containers superposed on the first named containers, locking means securing the upper and lower containers together, whereby a lower and a superposed container may be removed as a unit from the car and whereby upon releasing the locking means each container may be removed separately, doors for said containers, and an abutment on the car adapted to prevent the opening of the door of the lower container, and an abutment on the top of the lower container adapted to prevent the opening of the door of the upper container while on the car.

4. A freight compartment comprising top, bottom, side and end walls, a door for said compartment, a stop depending from the lower edge of the door, and abutments extending upwardly from two opposite top edges of the compartment.

5. A freight compartment comprising top, bottom, side and end walls and a door, a stabilizing element secured at each corner of the compartment and adapted to engage with the complementary element of the car, a locking bolt slidably connected with said stabilizing element, and a hasp secured near the top edge of the compartment.

6. A freight compartment comprising top, bottom, side and end walls, and a door, a stabilizing element secured at each corner of the compartment and adapted to engage with the complementary element of the car, a locking bolt slidably connected with said stabilizing element, and a hasp secured near the top edge of the compartment, and abutments extending vertically from two opposite top edges of the compartment.

7. A freight compartment comprising top, bottom, side and end walls, and a door, a

stabilizing element secured at each corner of the compartment and adapted to engage with the complementary element of the car, a locking bolt slidably connected with said stabilizing element, and a hasp secured near the top edge of the compartment, and abutments extending vertically from two opposite top edges of the compartment, and a stop depending from the lower edge portion of the door of the compartment.

8. The combination with a car, of a plurality of separate freight compartments mounted thereon and secured thereto, a plurality of separate freight compartments superposed on the first named freight compartments, crane attaching plates projecting upwardly from two opposite sides of the compartment, and vertically extending abutments projecting from two opposite ends of the compartment whereby the superposed compartment may be nested between said plates and said abutments, one of said abutments preventing the opening of the door of the superposed compartment while on the car, stabilizing elements secured at each corner of the compartment, a sliding bolt suspended from said stabilizing elements and threaded through a staple, a hasp mounted near the top edge of each compartment whereby the sliding bolt of the superposed compartment will engage the hasp of the lower compartment in position over the staple thereby locking the two compartments together so that they may be moved as a unit.

In testimony whereof I affix my signature.

ALFRED H. SMITH.