A. H. SMITH.

ANCHORING MEANS FOR INTERCHANGEABLE CAR UNITS.

APPLICATION FILED NOV. 5, 1920.

1,408,414. Patented Feb. 28, 1922.

2 SHEETS—SHEET 1.

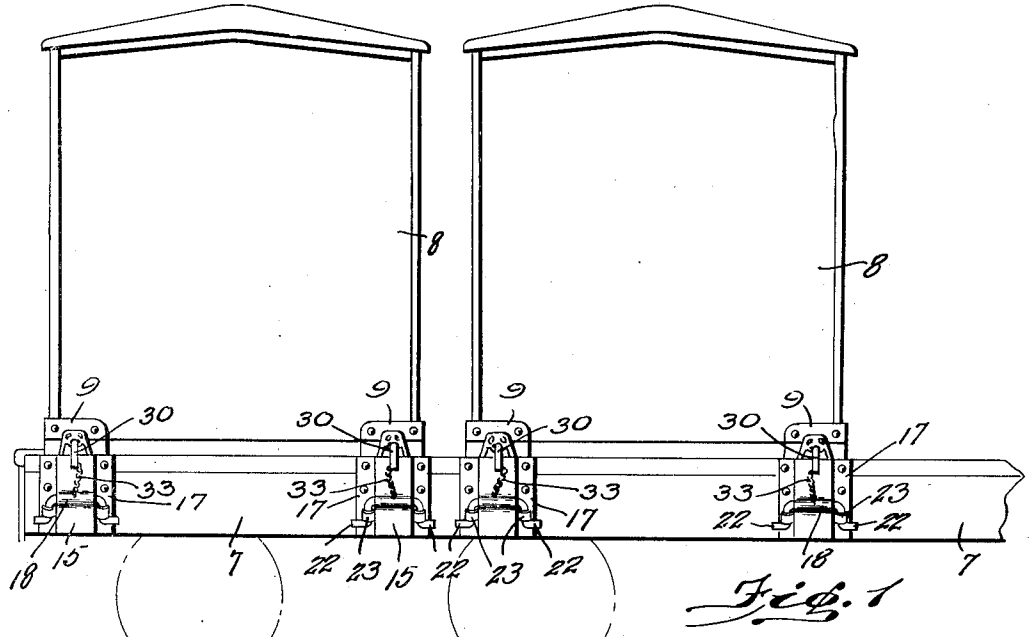


Fig. 1

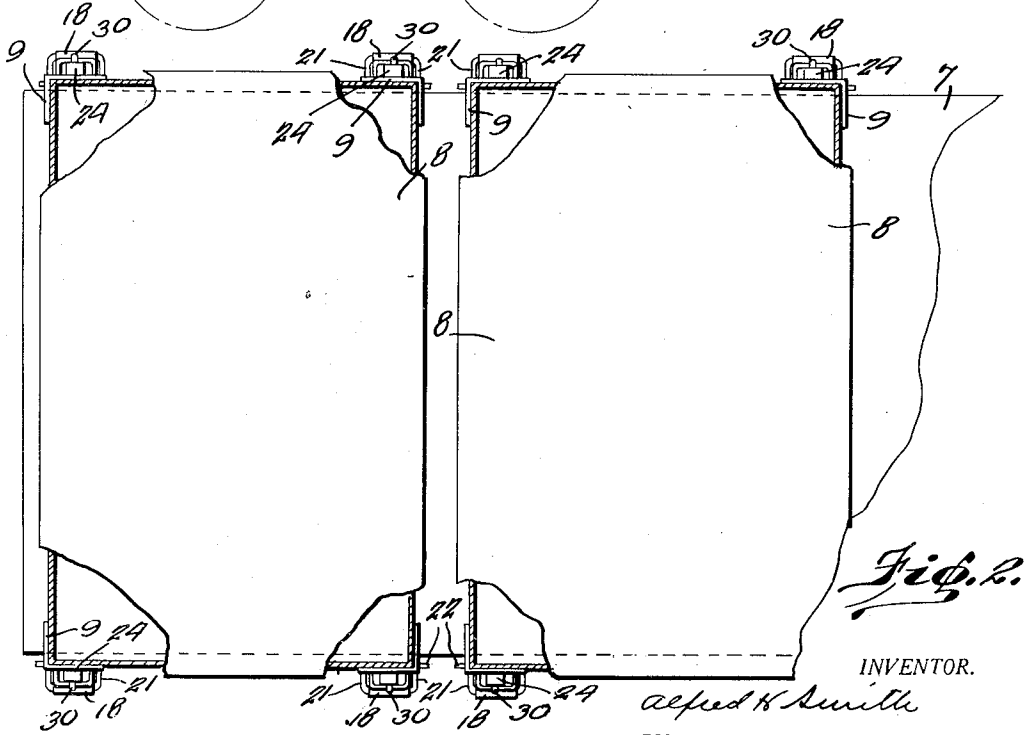


Fig. 2.

INVENTOR.

Alfred H. Smith

BY

Edwin S. Clarkson

ATTORNEY.

Witness

L. L. Lindsay

A. H. SMITH.

ANCHORING MEANS FOR INTERCHANGEABLE CAR UNITS.

APPLICATION FILED NOV. 5, 1920.

1,408,414. Patented Feb. 28, 1922.

2 SHEETS—SHEET 2.

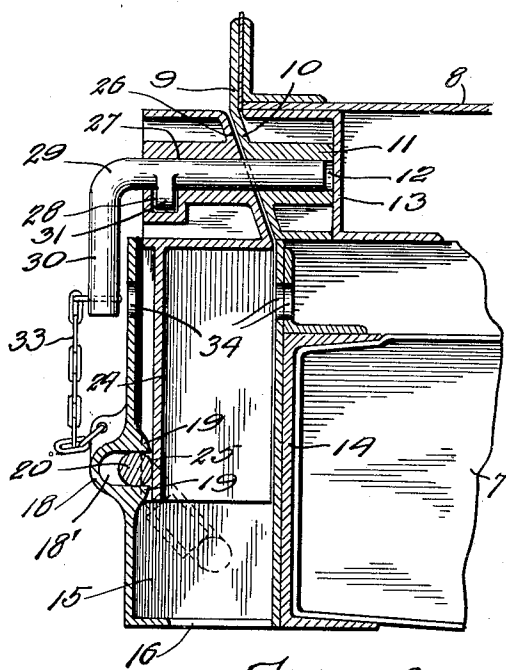


Fig. 3.

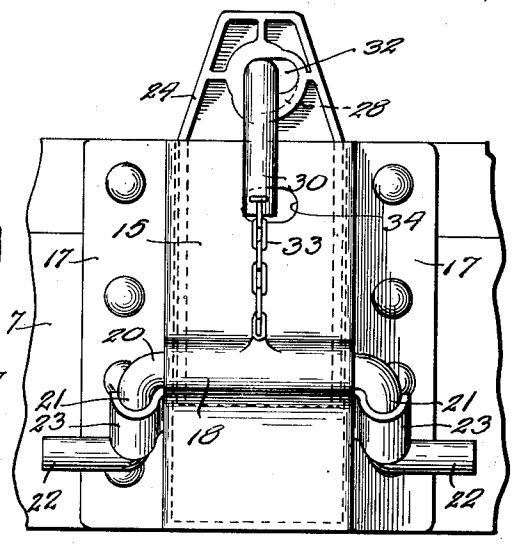


Fig. 4.

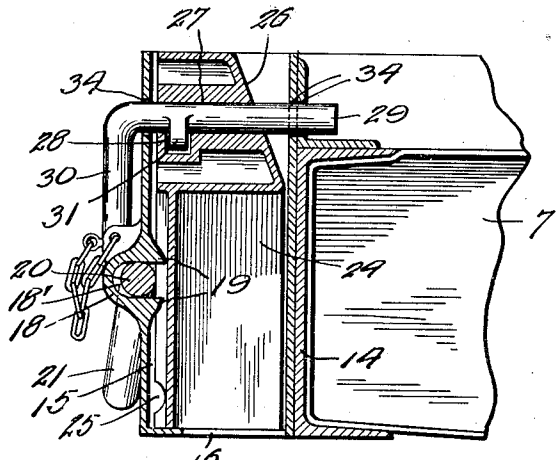


Fig. 5.

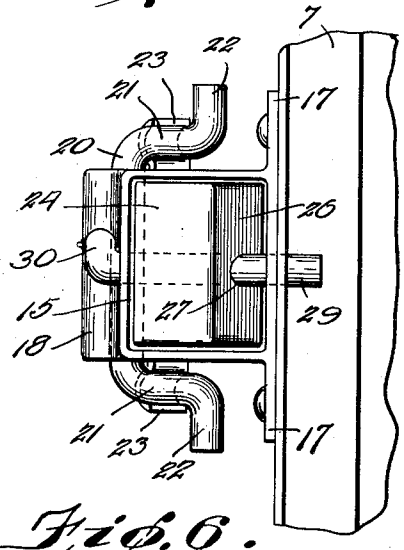


Fig. 6.

Witness

L. Cruchaud

Inventor

Alfred H Smith

By Edwin S Clarkson

Attorney

UNITED STATES PATENT OFFICE.

ALFRED H. SMITH, OF NEW YORK, N. Y.

ANCHORING MEANS FOR INTERCHANGEABLE CAR UNITS.

1,408,414. Specification of Letters Patent. Patented Feb. 28, 1922.

Application filed November 5, 1920. Serial No. 422,082.

To all whom it may concern:

Be it known that I, ALFRED H. SMITH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Anchoring Means for Interchangeable Car Units, of which the following is a description.

A system of handling freight and the like, in less than carload lots is now being practiced with beneficial results both to the consignor, consignee and to the transportation companies, in that the consignor may pack his shipment in a container at his place of business and seal it and deliver it sealed to the railroad company who in turn also seals the container and loads it on a car for shipment to destination and any one of the series of containers on a car may be removed at a way station by lifting it from the car with a crane or the like and placed on a truck or other vehicle and delivered to the place of business of the consignee who breaks both seals and removes his goods, whereupon the container is returned to the transportation company. This system enables way freight to be handled promptly and economically and the same economical result is experienced if the entire car load of containers have the same destination point.

This system saves about eighty per cent of the expense of a railroad in work and expense incident to way bills and it also results in reducing to a minimum, loss incident to theft which in itself is a very material item.

One of the objects of my invention is to equip a carrier with readily removable and interchangeable containers which are provided with shipper and transportation company seals, and to provide means for securely anchoring said containers on the carriers against accidental movement; and with these and other objects in view my invention consists in certain novel features of construction and arrangement of parts as will be hereinafter pointed out.

In the drawings:

Figure 1 is a side elevation of the end portion of a car and the containers mounted thereon.

Figure 2 is a top plan view of the same.

Figure 3 is a vertical transverse detail sectional view through the container and car embodying my invention.

Figure 4 is a side elevation of the same.

Figure 5 is a detail sectional view like Figure 3 showing the parts in a different position, the container being omitted.

Figure 6 is a top plan view of Figure 5, all parts being in full lines.

For the purpose of this case the term "carrier" will include trucks, barges, railroad cars and other vehicles of similar character.

The reference numeral 7 designates a carrier of any approved construction and 8 a container of suitable construction.

The containers have secured to their lower four corners a casting 9 which has a depending leg 10 with an outer underbeveled face from which a lug 11 extends rearwardly, said lug having a longitudinal bore 12; the rear end of this lug abuts against the vertical web of the Z bar 13 which is secured to the bottom of the container.

Secured to the side structure or sill 14 of the carrier is a hollow vertically disposed pocket 15 provided at its lower end with a drift opening 16, and extending from each side of the hollow portion of the pocket are flanges 17 through which rivets pass to secure the pocket in position. The outer face wall of the pocket is provided with an offset 18 in which is formed a recess 18′ opening into the hollow pocket strengthening lugs 19 projecting into the pocket from the top and bottom wall of the recess 18′.

A choke or lock 20 is slidably and revolubly mounted in the recess 18′ and is provided with arms 21 extending at an angle therefrom which terminate in stops 22 substantially at right angles thereto. The arms when the choke is in locking position rest in the horns 23 and when in this position the stops 22 engage one side wall of the horns, the horns 23 being in a plane below the plane of the recess 18′. When in unlocked position the choke and arms assume the position shown in Figure 5.

A hollow post or anchoring stake 24 is adapted to be slidably mounted in the pocket 15 and is provided on one side with recesses 25 which when the stake is elevated to its uppermost position are in the same horizontal plane as the recess 18′ so that when in this

position the choke 20 engages the three recesses, (see Figure 3) and thereby locks the stake in its elevated position, the choke being locked in position by reason of the engagement of the stops 22 with the inner wall of the horns 23 which hold the choke from moving outwardly in the recess 18.

The upper end of the stake is provided with a bevel face 26 corresponding to the bevel face of the leg 10 on the casting and is further provided with a bore 27 and recess 28 which recess communicates with the bore 27. A locking bolt 29 having a weighted handle 30 is adapted to pass through the bore 27 of the post and bore 12 of the casting 9 thereby locking the container 8 on the carrier, said bolt having a depending lug 31 which gravitates into the recess 28 thereby locking the bolt against accidental outward movement; the outer end of the bore 27 has an eccentric opening 32 which permits the passage of the lug 31. The bolt is secured to the car by means of a chain 33. The pocket and side structure of the car have openings 34 which aline with the bore 27 of the stake when the stake is telescoped with the pocket, as shown in Figure 5, through which the bolt 29 passes, to lock the parts in this position; and of course the opening 34 in the outer wall of the pocket has an eccentric portion like 32 in the stake.

When the carrier is to be used as a flat car the parts are in the position shown in Figure 5. When containers 8 are to be loaded on the carrier the stakes 24 are moved to the position shown in Figure 3, there being a stake for each corner of the container and when the container is in position the bolts 29 are shoved into the position shown in Figure 3, thereby locking the containers on the carrier against accidental movement.

Of course it will be understood that changes may be made in the construction and arrangement herein described without departing from the spirit of my invention, therefore I do not wish to be limited to the exact construction and arrangement shown.

What I claim is:

1. The combination with a flat car, of a series of freight compartments removably mounted on the car, and a series of disappearing stakes secured to said car and means on said stakes adapted to lock said compartments to said stakes; said stakes comprising a vertically moving member, and a bolt mounted in the head thereof.

2. The combination with a flat car, of a series of freight compartments removably mounted on the car; legs depending from the containers having their outer faces underbeveled and each provided with a bore; of a series of vertically disposed stakes and stake pockets secured to said car, each of said pockets comprising an elongated hollow body, a recess in one wall of said body and a locking element mounted in said recess; each of said stakes comprising an elongated body having the face of one wall beveled at the head of the stake adapted to engage the beveled face of a leg and a locking bolt secured in the head of each stake and adapted to enter the bore in said legs to lock the container to the car; said locking element being adapted to move in said recess to engage the stake and hold the stake in elevated position.

3. In a freight car, the combination with a vertically movable stake, of an elongated pocket secured to the car into which the stake may telescope, a recess in one wall of the pocket, a locking member positioned in said recess, a recess in one wall of the stake into which the locking member is adapted to project when the stake is in its elevated position, arms extending at an angle from said locking member, stops on said arms, and horns on the pocket adapted to be engaged by said stops.

In testimony whereof I affix my signature.

ALFRED H. SMITH.