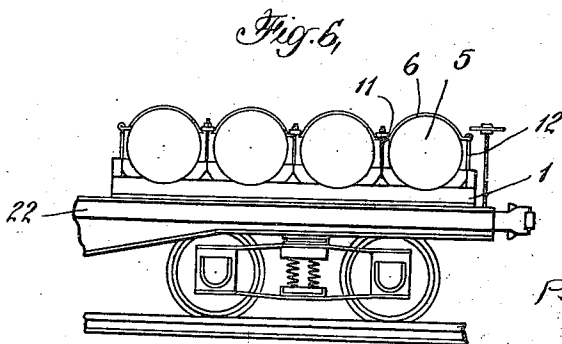
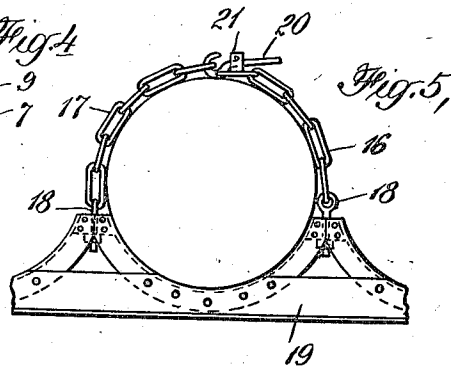
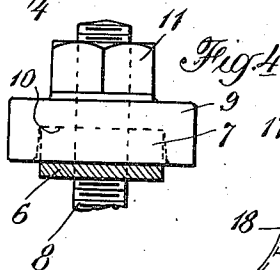
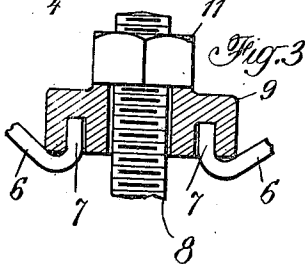
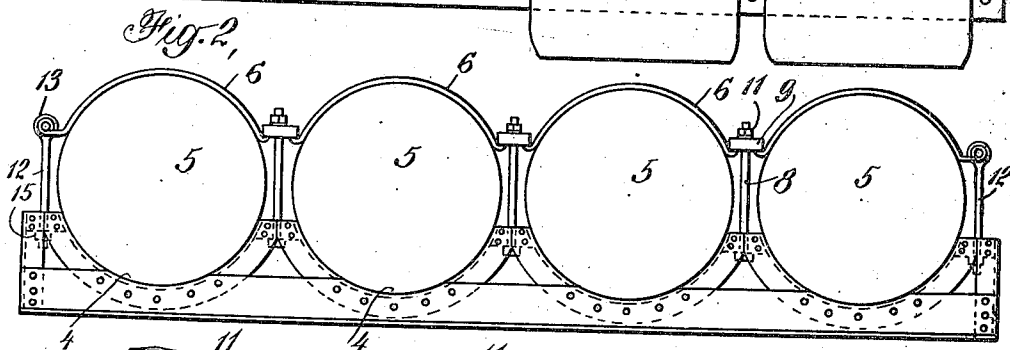
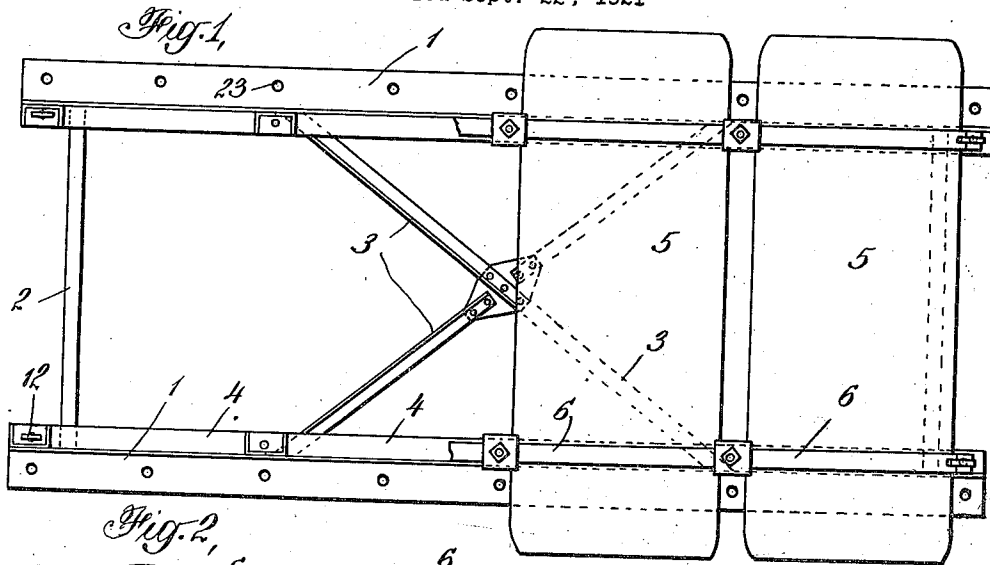


May 1, 1923.

M. MAURAN
MULTITANK CRADLE

1,453,474

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UNITED STATES PATENT OFFICE.

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MULTITANK CRADLE.

Application filed September 22, 1921. Serial No. 502,529.

To all whom it may concern:

Be it known that I, MAX MAURAN, a citizen of the United States, residing at Niagara Falls, in the county of Niagara, State of New York, have invented certain new and useful Improvements in Multitank Cradles; 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 is an improvement in multitank cradles and relates particularly to a cradle adapted for use with the usual type of railway flat car.

Cars especially designed for the carriage of tanks such as are used in the transportation of chlorine and the like may be provided with built in cradles forming a permanent part of the car.

Such cars are entirely satisfactory, and are economic in operation, when shipments are made at intervals, recurring with substantial regularity, and in car-load lots. When, however, the shipments are at uncertain periods, the cars are not always available, and if the shipments are delayed for any reason, the cars, which are suitable for the transportation of a particular character of goods only, will be idle. Furthermore, when shipments must be made of less than carload lots, the full capacity of the car cannot be utilized, since the portion of the car not occupied by the tanks is not capable of utilization for other freight. Since the cradles in this type of car are built-in, and form a permanent part of the car, they are not adapted for emergency use with existing cars, nor for application to such cars without material changes in the car.

The object of the present invention is to provide a cradle, adapted to be mounted on the usual type of car, either permanently or temporarily, to fit the car to carry a full or partial load of tanks, and without material change in the car itself.

In the drawings,

Figure 1 is a top plan view of the improved cradle,

Figure 2 is a side view,

Figure 3 is a sectional detail of a part of the clamping mechanism,

Figure 4 is a similar view at right angles to Figure 3,

Figure 5 is a partial end view showing an alternate form of clamping mechanism,

Figure 6 is a partial side view of a car with a cradle in place.

In the embodiment of the invention shown in Figures 1 to 4, the improved cradle comprises a pair of similar beams 1, of angle material in the present instance, arranged in spaced parallel relation, and rigidly connected together, by means of cross-bars 2, and crossbraces 3. The bars 2 are arranged at the ends of the beams, and the braces are arranged in X shape intermediate the ends. Thus there is provided a rigid framework for supporting the tanks, and capable of being mounted upon a car. The upper edges of the beams 1 are formed into depressed seats 4, shaped to fit the periphery of a tank 5, of the character which they are designed to support, and the seats of one beam register with those of the other, as clearly shown in Figure 1. At each seat, each beam has an inwardly extending flange as shown, curved on the same arc as the seat, to strengthen and reinforce the material of the beam.

Suitable means is provided for clamping the tanks to the seats. In Figure 1 the said means is in the form of bands 6 which are curved longitudinally to fit the peripheries of the tanks which they are designed to engage, and at each end each band has an upwardly bent lug 7 for a purpose to be presently described. The bands are of a length substantially equal to one-third the perimeter of the tank, and the adjacent ends of the bands at each side are connected to the cradle by means of a bolt 8. Each of these bolts passes through a portion of the beam between two adjacent seats, and upwardly between the seats as shown in Figure 2. A washer 9 is arranged on each bolt, above the ends of the bands 6, and each washer has depressions 10 in its underside, at opposite sides of the washer, for receiving the upturned lugs 7 of the bands. A nut 11 is threaded on to each bolt above the washer, and it will be obvious that by turning the nut, the washer may be forced downward, to tightly clamp the bands on the tanks. At the ends of the beams, the bolts 8 are replaced by bolts 12, having cross-heads 13 at their upper ends, to which the adjacent ends of the adjacent bands are hinged. The bolts 8 have their heads

downwardly, while with the bolts 12 the cross-head 13 of the bolt is the head, and the nuts 15 corresponding to the nuts 11 of the bolts 18 are below the portion of the beam through which the bolt passes. The improved cradle sections may be of any desired length, for containing any desired number of tanks. In the present instance the sections are of a length to support four tanks. Referring to Figure 1, it will be seen that the tanks are of greater length than the width of the framework of the cradle, so that the ends of the tanks extend beyond the frame at each side thereof.

If desired, the alternate form of clamping arrangement shown in Figure 5 may be used. This clamp comprises chain sections 16 and 17. Each chain section has at one end an eye bolt 18 engaging a portion of the frame of the cradle indicated at 19, and the free ends of the chains are connected by a hook lever 20. This lever is pivoted to the free end of the chain 16, and the hook engages the free end of the chain 17. A suitable clamp 21 is provided for holding the lever extending substantially parallel with the link to which it is pivoted, when the chains are connected. It will be understood that a pair of chains is provided for each end of each tank. The two chains of each pair are connected by engaging the hook of the lever 20 with the fast link of the chain 17, the lever being swung far enough to the left of Figure 5 to permit such engagement. The lever is then swung to the right and engaged with the clamp 21.

In Figure 6 there is shown a flat car 22, with cradle in place. It will be understood that the cradle sections may be of any desired length, preferably of such length that a multiple of the sections will fill a car. The sections may be anchored to the car in any suitable manner, and for this purpose openings 23 are provided in the beams 1, for engagement by bolts, rivets or the like. The full capacity of the car may be utilized with this type of cradle, or only a part, as may be found advisable. Either of the clamping mechanisms may be used for clamping the tanks to the cradle.

It will thus be seen that the present invention provides a cradle which may readily be mounted, either permanently or temporarily, upon the usual type of car. This cradle is in itself readily portable and forms a conven-

ient unit with attached tanks for handling purposes. Material change in the car is unnecessary. This cradle can be readily attached or detached and is adapted to be loaded upon a car or removed therefrom with its full load of tanks in place.

I claim:

1. A cradle of the class described, comprising a unitary frame adapted to be mounted on a car, and provided with a series of transversely extending parallel seats for receiving tanks, and means for clamping the tanks to the seats.

2. A cradle of the class described, comprising rigidly connected laterally spaced beams, having in their upper edges registering depressions forming seats for receiving tanks, and means for clamping the tanks on the seats.

3. A cradle of the class described, comprising rigidly connected laterally spaced beams having in their upper edges registering depressions forming seats for receiving tanks, and means at each seat for engaging the adjacent end of a tank seated in the seat for clamping said tank to the seat.

4. A cradle of the class described, comprising a unitary frame adapted to be mounted on a car and provided with a plurality of substantially parallel seats and means in connection with the frame for engaging each end of tanks in the seats to clamp them on the seats.

5. A device of the class described, comprising a unitary frame adapted to be mounted on a car and provided with a series of parallel seats, substantially cylindrical tanks or containers in the seats and means for clamping the tanks to the seats.

6. In combination with a car having a floor or platform, a unitary frame mounted on the platform and having its on upper side a series of registering depressions forming parallel seats for receiving tanks, and means for clamping the tanks on the seats.

7. In combination with car having a floor or platform, a unitary frame on the platform, and having on its upper side a series of registering depressions forming parallel seats for receiving tanks, means for clamping the tanks on the seats, and means to clamp the frame on the platform.

In testimony whereof I affix my signature.

MAX MAURAN.