W. H. MARTIN.

REVOLVING SUSPENSION RACK.

APPLICATION FILED MAY 16, 1912.

1,084,022.

Patented Jan. 13, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

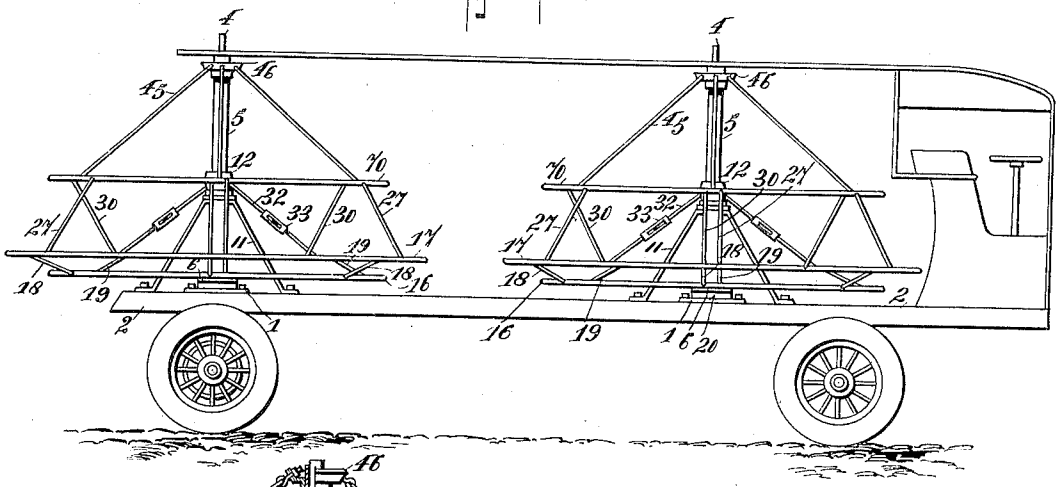


Fig. 4.

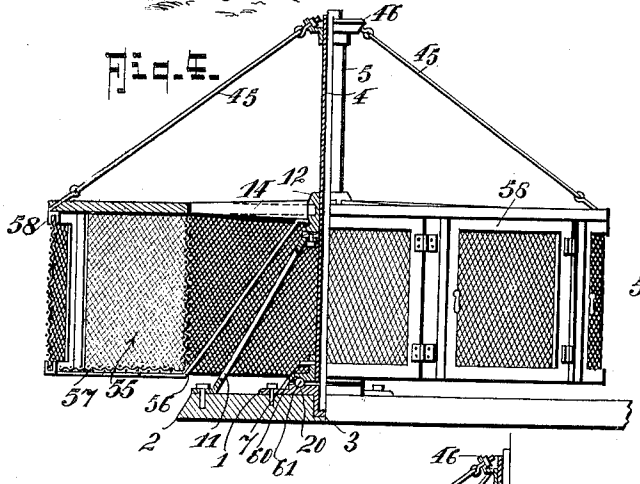


Fig. 5.

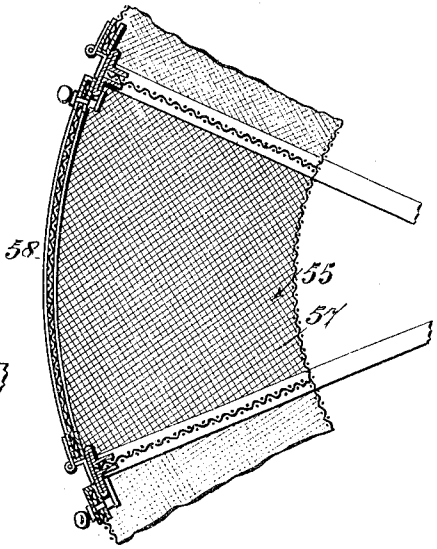
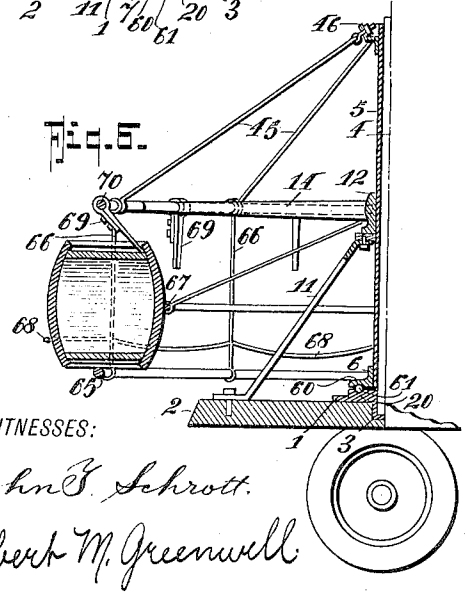


Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 2.

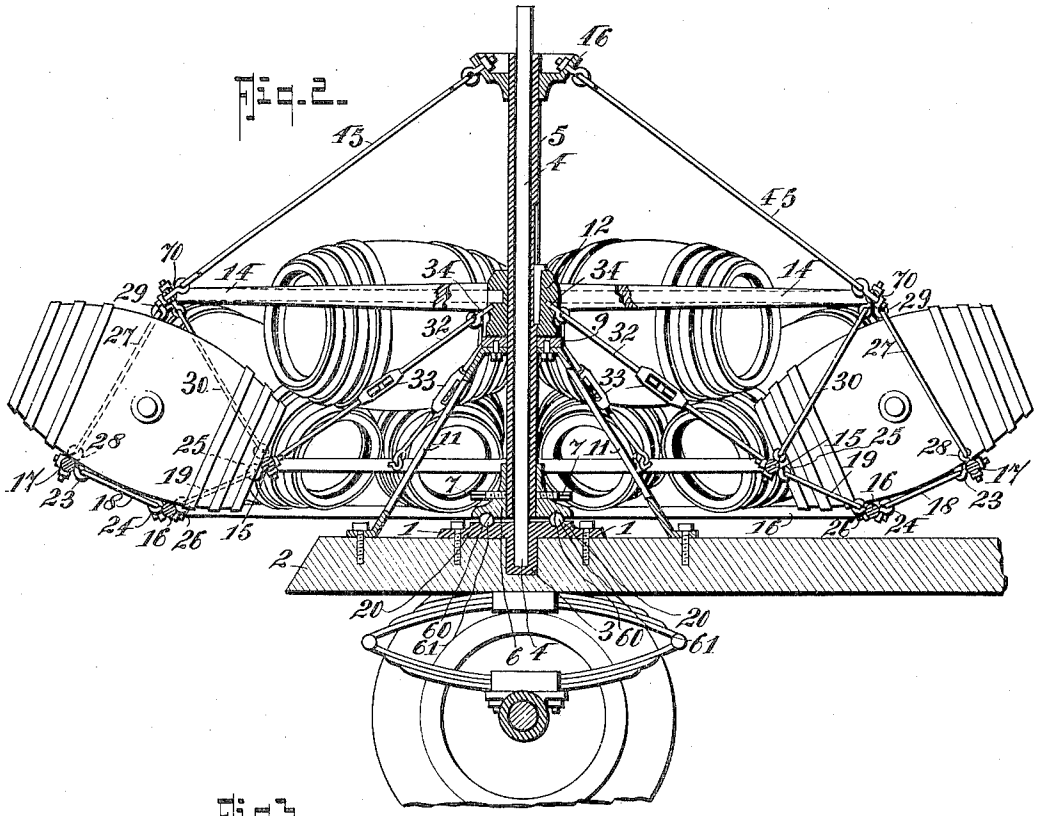
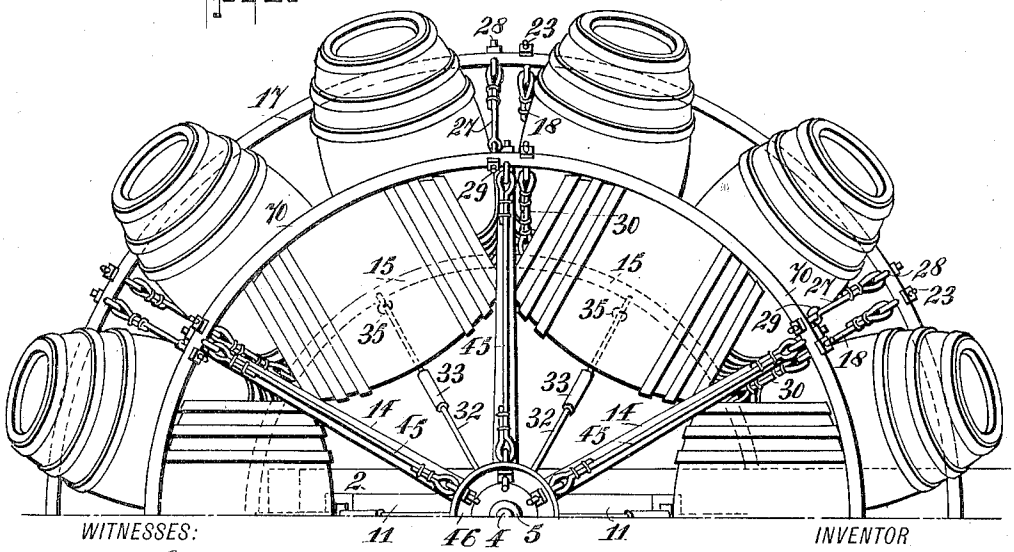


Fig. 3.



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REVOLVING SUSPENSION-RACK.

1,084,022. Specification of Letters Patent. Patented Jan. 13, 1914.

Application filed May 16, 1912. Serial No. 697,779.

To all whom it may concern:

Be it known that I, WILLIAM H. MARTIN, residing at Ukiah, in the county of Mendocino and State of California, have invented a new and Improved Revolving Suspension-Rack, of which the following is a specification.

This invention relates to improvements in that class of racks or supporting means more especially designed for use in the transportation of heavy articles and it primarily has for its object to provide a rack for holding heavy casks or kegs, of a simple and inexpensive character, capable of being readily mounted upon a motor truck, and for sustaining a large number of casks or kegs, and in such a manner that they may be easily handled in the act of placing them upon or removing them from the supporting rack and the truck, when the rack is mounted upon a truck.

In its generic nature, my invention embodies a central mast or supporting member including a centrally disposed bed or table, and means for sustaining the same in a rigid upright position on a truck, a series of main supporting arms that extend radially form the central mast and from a hub held to revolve about the mast, and flexible sling like holders pendently supported from the radial arms, the said holders serving to sustain casks or kegs in a position, radially with respect to the rack, and in such a manner that they form supports for holding an upper row of kegs or other like bodies in circumferential relation to the rack.

Another object of my invention, is to provide for so sustaining the kegs on their supporting slings that all danger of any of them rolling out of position during transportation is overcome.

With other objects in view that will be hereinafter referred to, my invention consists in the novel arrangement and the peculiar construction of the parts hereinafter fully described, specifically pointed out in the appended claims and illustrated in the accompanying drawings, in which:

Figure 1 is a diagrammatic side elevation of a motor truck, provided with a pair of my improved revolving racks. Fig. 2 is a longitudinal section of the rear end of the truck and one of my revolving racks, the latter being shown as holding beer kegs. Fig. 3 is a partial plan view of the rack shown in Fig. 2, and illustrates the relative arrangement of the two tiers of kegs when the rack is loaded. Fig. 4 illustrates, partly in vertical elevation, and vertical section, a modified construction of my rack. Fig. 5 is a horizontal section of one of the compartments of the rack shown in Fig. 4, and Fig. 6 is a detail elevation, partly in section, of a further modification of my invention.

In carrying out my invention, and when arranged for carrying heavy casks and the like, I prefer to construct the same as shown in Figs. 1, 2 and 3, in which 1 designates a bed plate that is secured upon the truck platform 2, and has a central socket 3 to receive the lower end of a central mast 4, that forms a guide for a hollow mast 5, the lower end of which carries a bearing hub 6, that is adjustably clamped to the mast by the clamp screws 7. Hub 6 has a ball race 60 for receiving the bearing balls 61, that also ride in a race 20, in the bed plate 2.

9 designates a bearing table mounted around the mast and securely braced and supported by a series of inclined bracket bars or arms 11, having foot portions for bolting to the truck bed as shown.

12 designates a hub that is keyed on the tubular shaft to turn therewith, and the said hub rests and revolves upon the bed or table 9.

14 designates a number of sweep arms that radiate from and turn with the hub 12, and these arms connect with a hoop 70 and form the main supports for sustaining the kegs or other heavy bodies to be racked and transported.

The rack or supporting means, on which the keg rests, is comprised of a series of heavy rod iron hoops, designated 15, 16, and 17, and these while concentrically arranged, are relatively so disposed, whereby they have a triangular arrangement in cross section, two of the said hoops, the inner one 15, and the outer one 17, being in the same horizontal plane, while the other hoop 16, is disposed intermediate of but in a lower plane, the reason for which will presently appear.

The central hoop 16, is disposed in the vertical plane of the outer or suspension ends of the sweep arms, and the said hoop 16, is suspended from the other two hoops 15 and 17 by means of a series of outer flexible hanger braces 18, and a like series of inner flexible hanger braces 19. Braces 18

and 19 are preferably cables, the outer ends of cables 18, fastening to eye bolts 23, secured to the outer ring 17, while the inner ends of the said cables 18 likewise fasten to eye bolts 24, secured to the lower hoop 16. Cables 19 are fastened at one end to eye bolts 25, on the inner hoop 15, and at their other end to eye bolts 26 on the lower hoop 16, the several connections being such that the hoops 15, 16, and 17, and the flexible connections 18 and 19 form, as it were, a series of slings, of which there may be arranged one for each barrel, if desired.

In the drawings, see Fig. 2, I have shown each "sling" of such length that two kegs may be supported thereon, radially to the axis of the revolving rack, it being obvious, however, that the slings may be made to receive a greater number of barrels. It should be here stated, that by providing the rack in a number of slings or compartments the kegs supported in any one of the slings or compartments may be readily removed or placed therein without in the slightest manner effecting the arrangement of the kegs in the other slings or compartments. The several slings are suspended from the hoop 70 by the outwardly inclined flexible cables or braces 27, the lower ends of which are connected to eye bolts 28 on the outer hoop 17, while the upper ends are likewise connected to the eye bolts 29 on the outer end of the arms 14.

30 designate other, hereinafter termed inner hanger cables, that join at one end, with the hoop 70, and at the other end, to the inner hoop 15.

By referring to Fig. 2, it will be noticed that by reason of arranging the central hoop 16 in a lower plane than the other hoops, the keg is supported at an incline with the body thereof, resting solid on the inner and outer hoops, and the lower or inner end abutting the inner hoop.

By supporting the kegs in the manner stated and shown, they are positively held from displacement under ordinary transportation and they are so positioned with respect to the rack, that they may be readily removed or placed into position.

32 designates supplemental hanger braces, and these are preferably in the nature of stout rods, formed in sections, joined by turn buckles 33, the upper ends of the said rods being pivotally joined to eye bolts 34 on a hub flange, see Fig. 2, while the lower ends join to eye bolts 35 on the inner hoop 15. The members 32 materially strengthen the sling portions of the rack and assist in sustaining an upper tier of barrels, which when loaded onto the truck, are arranged end to end, and concentric with the hoops, one of such upper barrels resting on the inner or lower ends of each pair of the lower or radially disposed barrels.

45 designate cable stays that join with the outer ends of the sweep arms 14, hoop 70, and a flanged hub 46, on the upper end of the tubular mast.

By reason of arranging the barrel supporting means in the manner shown and described, and particularly the arrangement of the pendent slings and the hoops, the entire weight thrust of the load is inwardly toward the vertical axis of the rack, and thereby equalizes the strain on the central mast or supporting member, and renders the turning of the loaded rack easy and without undue strain on any of the separate barrel holding members. Furthermore, by arranging the supports for the lower tier of barrels in the manner described and shown, the said lower barrels are positively held down to the desired position by the upper row of barrels, and the latter are so held that the weight pressure is also toward the central mast or support, the said pressure being distributed by reason of the said upper barrels bearing on the rod braces that extend from the sweep arms hub to the inner hoop 15. While the arrangement of my invention as hereinbefore described and shown, Figs. 1, 2 and 3, is a preferred one, I desire it understood that the said arrangement may be materially modified without departing from my invention as expressed in the appended claims. For example, for conveying goods other than barrels, instead of providing the slings and hoops as described, the compartments may be as shown in Figs. 4 and 5. In the latter form the compartments 55 are vertically suspended from the sweep arms 14, and braced by the inclined rods 56, fastened at the upper end to the hub of the arms 14, their lower ends terminating in radially extended horizontal members 57, that go under the bottoms of and form supports for the compartments 55. The bottom and all of the sides of each compartment in the form shown in Figs. 4 and 5 are of wire mesh, and the outer sides having hinged doors 58, through which the compartment is loaded or emptied.

In Fig. 6 I have shown a further modification of my invention, and in the said showing, the parts are arranged for transporting or racking barrels. In this form, a bottom hoop 65 is used, suspended by flexible braces 66 from the hoop 70. Another hoop 67, of less diameter than the outer hoop, and disposed on a plane above the bottom hoop, forms a stay or bearing for engaging the inner sides of the barrels, which in the form shown, in Fig. 6, are vertically disposed, they being mounted on end, on the bottom hoop 65. For holding them drawn inwardly toward the central axis of the rack, a flexible band 68, encircles the said barrels, and holds the barrels bearing inwardly

against the hoop 67. To further hold the barrels in position on the rack, drop levers or pawls 69 are loosely hung from the hoop 70, and since they are longer than the distance between the tops of the kegs and the arms, after the keg has been set in place on the rack and its upper end shoved past the members 69, the latter drop back onto the top of the barrel to engage the upper chine or flange of the barrel to form a lock pawl for holding the barrels from swinging outwardly and dropping off the rack.

What I claim is:—

1. A rack of the character described, comprising a central support, sweep arms revolubly mounted on the said support, means pendent from the said arms for sustaining barrels and the like in radial alinement with respect to the central support, and other means connectible with the first stated means and the sweep arms for sustaining other barrels upon the inner ends of the first mentioned barrels.

2. A rack of the character described, comprising a central supporting shaft, a tubular sleeve rotatable on said shaft, an anti-friction bearing member at the bottom of said sleeve, a hub-like member on said sleeve intermediate its ends, radial spokes projecting from said hub-like member, a rim portion engaging said spokes, diagonal brace rods connecting said rim portion with the upper end of said sleeve member, a second rim-like member disposed in a plane below said hub, radial brace rods connecting said second rim-like member with said hub, bracing members connecting said upper and lower rim members, and means coöperating with said rim members for sustaining the articles to be carried.

3. A revolving rack of the character described, comprising a central support, arms secured to the support and projected radially therefrom and at right angles thereto, means pendent from the arms for sustaining barrels inclined toward and in radial alinement with the central support, and other means connectible with the first mentioned means and the arms for sustaining other barrels upon the inner ends of the first mentioned barrels and in position concentric with the central support.

4. A revolving rack of the character described, comprising a central support, sweep arms projected from the support and revolubly mounted thereon, means pendent from the outer ends of the arms for supporting heavy articles, said means including a series of concentric hoops consisting of an inner and an outer hoop and a central hoop, the latter being in a plane below the inner and outer hoops, and flexible connections joining the hoops with each other, and with the outer ends of the sweep arm.

5. A revolving rack of the character described, comprising a central support, sweep arms projected from the support and revolubly mounted thereon, means pendent from the outer ends of the arms for supporting heavy articles, said means including a series of concentric hoops consisting of an inner and an outer hoop and a central hoop, the latter being in a plane below the inner and outer hoops, and flexible connections joining the hoops with each other and with the outer ends of the sweep arm, and other connections that join the innermost ones of the hoops with the hub ends of the sweep arms.

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Witnesses:
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