July 30, 1929. R. E. MANLEY 1,722,585

TOWING TRUCK

Filed April 18, 1922

Fig. 1.

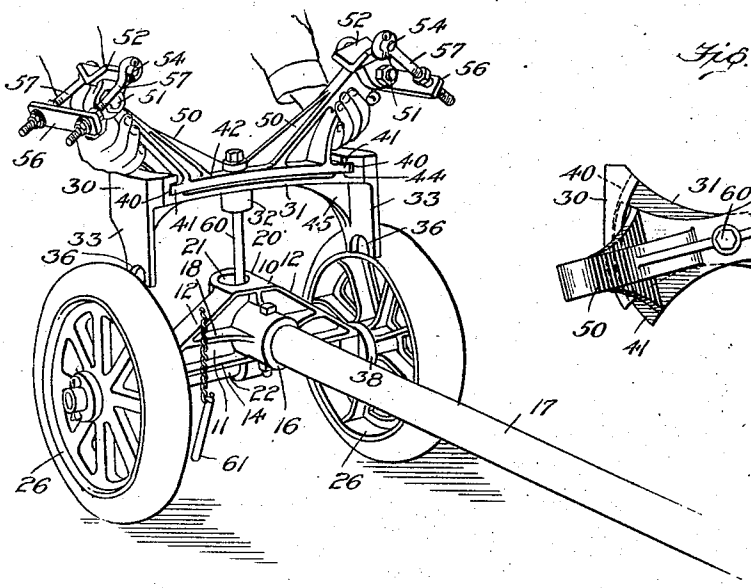


Fig. 4.

Fig. 2.

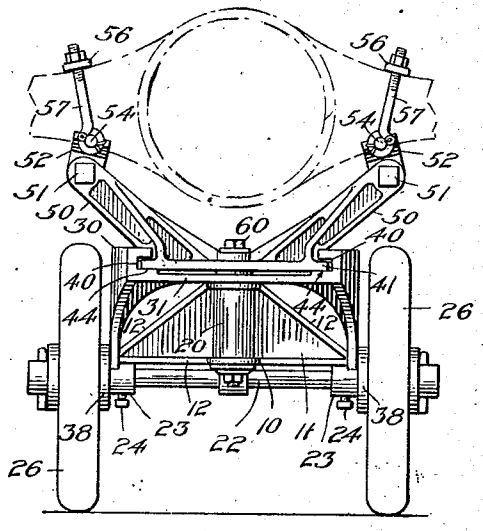
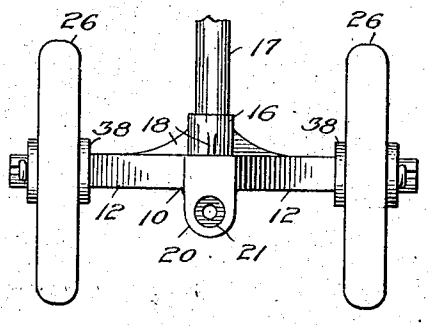


Fig. 3.



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UNITED STATES PATENT OFFICE.

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TOWING TRUCK.

Application filed April 18, 1922. Serial No. 554,670.

This invention relates to a piece of garage equipment quite generally known as an ambulance in its simple form which is referred to as a towing truck in the present application since the device here illustrated is far superior in manipulation and results to such ambulances.

An object of the invention is to provide a more efficient ambulance without adding unduly to its weight or increasing to a material extent its simplicity.

A second object of the present invention is to provide a towing truck which will permit the use of a single post connection when desired and which will when desired accommodate the double post connection which is more suitable for general use.

Other objects of the invention pertain more especially to the individual members of the towing truck assembly as will be apparent from an inspection of the claims.

In the drawings,—

Figure 1 is a perspective view of the towing truck as viewed from the front or tongue side and showing the double post base and its bearing table being lifted out of engagement with the truck proper or body of the device.

Figure 2 is a rear view.

Fig. 3 is a top plan view of the body.

Fig. 4 is a top plan view of the assembled double arm structure and its supporting table.

The body 10 in its preferred form is built much like a girder having a central plate or web 11 bounded on all sides by flanges such as the sloping upper flanges 12 and the horizontal lower flange 14 which cause the body to resemble somewhat an I-beam, the main web 11 being centrally spaced with respect to these flanges.

At its front end a horizontally disposed hollow cylinder 16 projects from the web and forms a socket to receive the tongue 17 of the vehicle preferably of the telescoping type. The cylinder 16 is braced at top and sides by the strengthening and stiffening ribs 18. A hollow vertical cylinder 20 also integral with the web and flanges has a large central opening 21 reamed to fit the post of the single post connection and also to receive a boss on the double post connection.

The axle 22 passes through bearings 23 on the body and is held in position by set screws such as 24 or any other preferred fastenings. The two ground wheels 26 are preferably bushed with a hardened sleeve and carry hardened rollers. These wheel details are not illustrated as they are well known in other and similar structures although rarely used in towing trucks or ambulances.

The bearing table 30 is generally bridge-shaped consisting of a main table 31 having a central boss 32 to fit the post socket 21 and a pair of lugs 33 each forked or cut away at the bottom as at 36 to receive snugly the tapered portion of the body just inside of the circular abutments 38 which serve on their inner surfaces to position the bearing table and on their outer surfaces as shoulders for the ground wheels 26.

The arcuate sides of the bearing table are each grooved to form a raceway 40 which receives the flange-like extensions 41 of the base 42. It will be noted that the extensions 41 bear directly on the lower surface 44 of the raceway 40 so that any weight imposed on the base 42 is transmitted through the lugs 33 and the curved stiffening ribs 45 directly to the girder-like body 10 at points just to one side of the ground wheels.

The posts or arms 50 diverge at an angle preferably in excess of 90° and at their ends are perforated to receive swivel bolts 51 which pivotally support the offset rests 52 which are conveniently formed in the Y-shape shown, the V-groove in the top of this Y accommodating itself to all of the various forms of axles and axle housings common in practice. Each rest 52 is provided with a pair of oppositely directed round projections 54 which are coaxial with each other and have their axes parallel to the axis of the swivel bolt 51.

A clamp strap 56 is pivotally carried by a pair of eye-bolts 57 which pivot on the round or cylindrical projections 54 so as to swing completely around these projections and to drop out of the way when not wanted. To hold a rear axle housing for example, the automobile is raised and seated in the two rests 52 which pivot to accommodate the housing irrespective of its shape. The clamp straps 56, with one eye-bolt of each disconnected, are placed in proper position, tightened, and if desired they may be secured in place by lock nuts, although it will generally be found satisfactory to use a single nut and a locking washer.

The large spread of the post or arms is to clear all passenger vehicle differential housings and in addition to take care of a number of the lighter trucks. The single post equip-

ment is not illustrated in this application as it is well known, having been in use for a number of years.

When it is desired to substitute the more efficient double post connection, the single post equipment is removed from the post socket 20 and the bearing table and double post structure inserted. In so doing the boss 32 which snugly fits the post socket is guided into position after which the forked lugs of the bearing table will be lowered to snugly engage the body. The bearing plate is then secured to the truck body by a connecting bolt 60 extending from below.

In case the device is to be used on the front axle it is of course necessary that the truck shall pivot as explained but when the truck is used on the rear axle it is usually convenient to lock it against such rotation, this being accomplished by slipping a headed pin into the hole 62 in the base plate of the double post structure and into a corresponding hole in the table 30.

What I claim is:

1. In a towing truck, a body having two supporting wheels, a vertical pivot, a base mounted on said pivot, two divergent arms carried by said base, a clamping means on the free end of each of said arms, and means for transmitting the weight of the towed vehicle downwardly from each arm to the axis of the supporting wheels at a point adjacent the proximate wheel.

2. In a towing truck, a wheeled body, an intermediate member having a plurality of separated bearings on said body, a support pivoted on said intermediate member and movable about a vertical axis, and securing means carried by said support.

3. In a towing truck, a body, a pair of wheels for said body, an intermediate member having a bearing on said body closely adjacent each wheel, a support mounted on said member to turn about a central vertical axis and securing means on said support in substantial vertical alinement with each of said bearings.

4. In a towing truck, a wheeled body, a bearing table engaging said body at its center and provided with a pair of legs arranged one at each end thereof to straddle said body and bearing thereon adjacent to the wheels.

5. In a towing truck, a support, a plurality of rests pivoted thereon, a pair of pivots on each rest, and a clamping device pivotally secured to each rest by means of said pivots.

6. In a towing truck, a pair of pivoted rests adapted to engage the rear axle housing of an automobile and each having oppositely extending coaxial trunnions adapted to pivot a clamping member.

7. In a towing truck, a wheeled body having a single axle, a pair of spaced arms to support a disabled car, and an intermediate table between the wheeled body and said arms pivotally receiving said arms and having vertical legs above said axle whereby the weight of the car being towed is transmitted to two spaced points directly above said axle in any position of said arms.

8. In a towing truck, a wheeled body having a vertical socket therein adapted to receive the post of a superstructure, a turntable mechanism adapted to straddle said body and having a central boss adapted to be received within said socket, a plurality of offset pivoted rest members on the turntable, and clamping means pivoted to each of said rests, the axes of the pivots of the clamping means being parallel.

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