

Dec. 12, 1950

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2,533,772

FIRE TRUCK

Filed Oct. 21, 1948

2 Sheets-Sheet 1

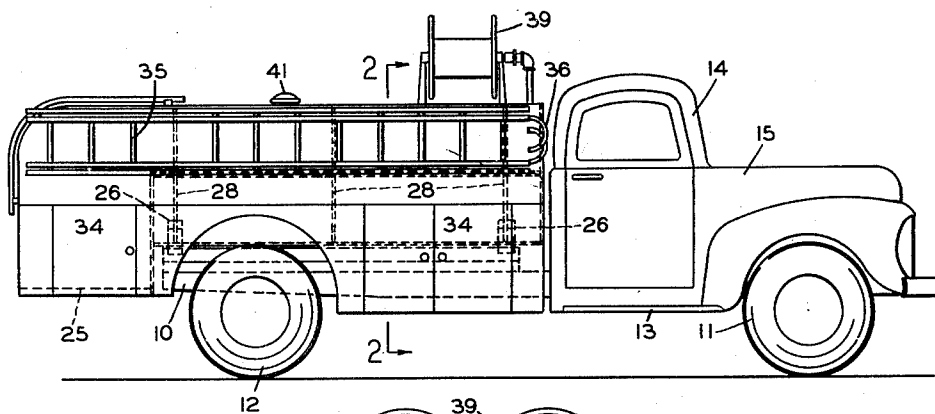


FIG-1

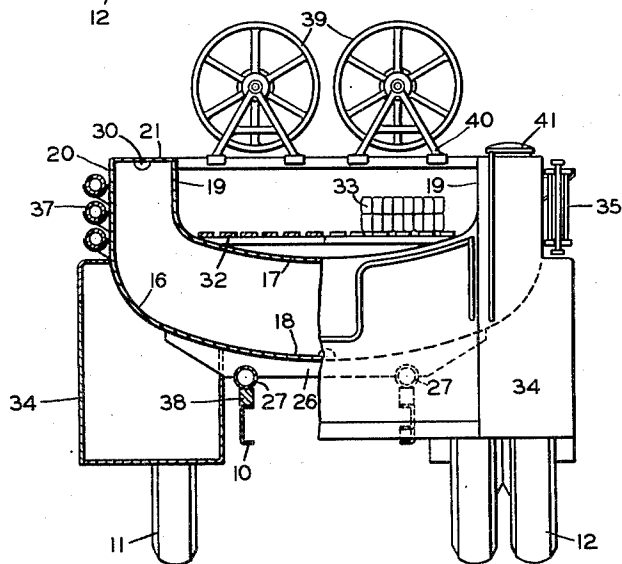


FIG-2

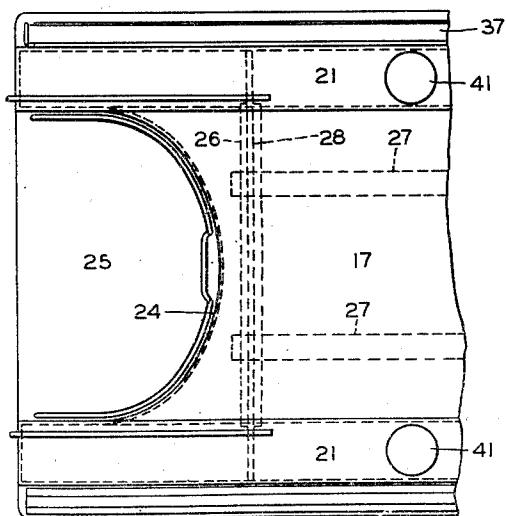


FIG-3

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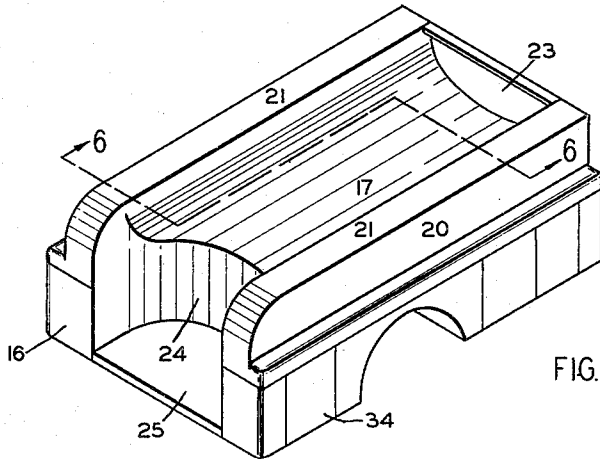
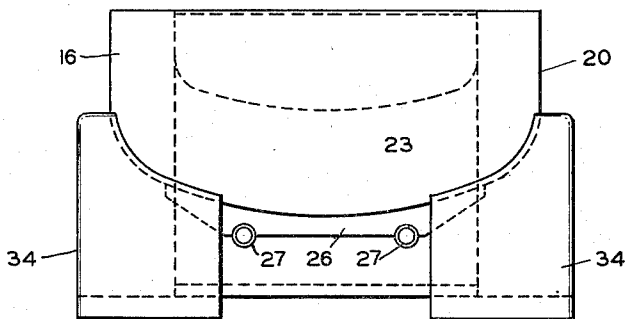
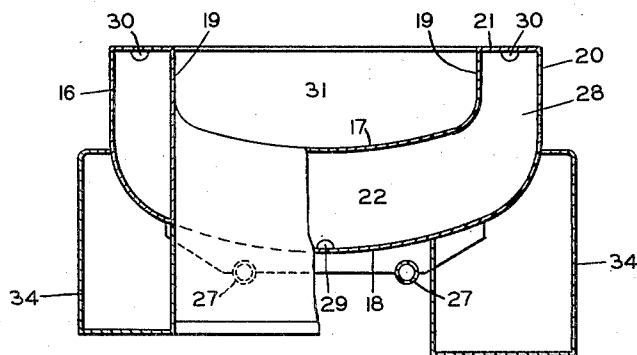
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FIRE TRUCK

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2 Sheets-Sheet 2



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FIRE TRUCK

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2 Claims. (Cl. 280-4)

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This invention relates to fire trucks, and more particularly to motor operated trucks suitable for use in small communities not equipped with water hydrant protection.

One object of the invention is to provide an improved fire truck of very compact form which carries all the necessary items for fire extinguishment, including not only its own generous water supply, but also hose, ladders, pumps, tools and the other usual items of fire fighting equipment.

Still another object is to provide an improved fire truck in which the water holding tank itself, in effect, is or becomes the body of the truck, carrying and transmitting in large part the strains and stresses of traction and travel.

Another object is to provide an improved fire truck including a water holding tank of special form, shaped to provide not only maximum water holding capacity but also the necessary space for conveniently holding or storing hose, ladders and other fire fighting equipment, as well as shielded or protected standing room for the firemen.

Another object is to provide an improved fire truck including a water tank shell of special form having its body portion curved to generally semi-cylindrical form about a longitudinal axis, and presenting a convex surface downwardly for solid anchorage upon the truck frame, and a concave surface upwardly to provide storage space, and also recessed at its rear end to provide standing space for passengers, and still preserving generous water storage space.

Further objects of the invention in part are obvious and in part will appear more in detail hereinafter.

In the drawings, Fig. 1 is a side elevation of one form of fire truck embodying the invention;

Fig. 2 is in part a rear elevation and in part a sectional elevation on the line 2-2, Fig. 1;

Fig. 3 is a plan view of the rear end portion of the truck;

Fig. 4 is a perspective view of the tank body or shell;

Fig. 5 is a front end elevation thereof; and

Fig. 6 is a cross section on the line 6-6, Fig. 4.

Referring to the drawings, the fire truck shown includes a frame or chassis 10, of any suitable form, mounted upon front and rear wheels 11, 12. 13 indicates generally the tractor unit or portion of the truck, including the driver's seat and cab 14 and a hood 15 enclosing the usual internal combustion engine (not shown), having a power takeoff to a pump or pumps (also not shown) and any other pieces of power equipment desirable or

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necessary on trucks of this kind. Suitable piping and valves adapt this equipment to pump water from wells, ponds, streams or hydrants either directly into a storage tank later described, or directly to hose or regulation fire lines, or both, or from the tank to the hose or fire lines. But such equipment forms no part of the present invention and therefore requires no further description.

Upon the truck frame or chassis is mounted a water storage tank or body structure of special form, designed not only to provide maximum water storage capacity, but to also lend itself to the storage or support of other pieces of equipment. This tank, marked 16, is shown in detail in Figs. 4, 5 and 6. Generally speaking, it is of hollow semi-cylindrical or trough shape, or shallow U-shape, in cross section, including an upper horizontal wall 17, concave upwardly, a lower curved wall 18 convex downwardly, and upstanding parallel vertical walls 19, 20 at the sides, joined by a flat top 21. The chamber or space 22 enclosed between said walls is closed at its front end by a flat transverse wall 23 and at its rear end by a wall 24 curved in re-entrant form to provide a recess or space between rearwardly extending side portions of the body structure for standing room for passengers, said space being provided with a metal floor plate 25, as will be readily understood.

The arrangement described provides a storage space or chamber 22 of generally hollow semi-cylindrical form, curved about a longitudinal axis, and of maximum storage capacity, considering the bulk of the truck as a whole. In one truck of this kind, for example, the truck has a capacity of one thousand gallons. Formed, as it is, its wall 18 presents downwardly a convex surface readily fitted for firm anchorage to two or more cross bolsters 26, which rest upon longitudinally extending tubular members 27, the cross bolsters being welded both to the tubular frame members and to the tank wall 18, so that the unit, including members 16, 26 and 27 is very strong and rigid and well able to serve as the body of the truck, for accepting and transmitting all of the usual strains of travel and traction. The tank shell also may be reinforced and strengthened by several transversely extending surge plates 28, each provided at a low point with a drain opening 29 and at an upper point with a vent opening 30. Otherwise, these surge plates are simple cross plates closely fitting and welded to the walls of the shell. Three such

plates are shown, one over each bolster and one intermediate the length of the tank.

The upper wall 17 of the shell forms the bottom of a recess or cavity 31, bounded on both sides by the vertical walls 19. This chamber or cavity may be used for any purpose, but usually is provided with a removable wooden floor 32, Fig. 2, upon which fire hose 33 may be folded and stored.

At the sides of the truck the space beneath and at the sides of the bottom of the shell is filled with cabinets marked generally 34, both fore and aft of the rear wheels 12. These cabinets are provided with hinged doors and are used for the storage of tools, clothing and other small articles of fire fighters' equipment.

Ladders 35 and hook poles 36 may be stored in the spaces above the cabinets 34 and along the outside of tank walls 20, on one side of the truck, while large suction hose, indicated at 37, may be stored in the like space on the other side of the truck.

The longitudinal tubular tank frame members 27 rest upon wooden floor blocks 38, which not only serve as supports but also more or less cushion the transfer of shock or strain from the tank to the truck frame.

A hose reel 39 may be mounted upon suitable frames 40 above the tank, just behind the driver's cab.

Suitable means may be provided for filling the tank, such as large hinge caps 41, one in each of the top walls 21 of the two legs of the tank.

The construction described is particularly adapted for use in small communities where water hydrant fire protection is not available and where a fire must be put out either with water carried to the scene, or drawn from a natural source, such as a pond, stream or the like. It not only provides maximum water-carrying capacity, considering the total bulk of the truck as a whole, but at the same time has an extremely low center of gravity so that it is safe at high speeds on modern roadways.

When the surge plates 28 are employed, the water load is fully baffled, even on partial loads. But even though such surge plates are omitted, as they may be, surging is reduced to a minimum, especially on partial loads, by the special U-form tank, which tends to split up or subdivide any surge or wave so that the otherwise detrimental effect in a round or elliptical tank is largely overcome.

The tank itself provides three-sided protection to passengers standing on the rear platform. The

tank may be filled from either side and provides ample hose and ladder-carrying space.

Other advantages of the invention will be apparent to those skilled in the art.

What I claim is:

1. A fire truck comprising a wheeled frame, and a combined water-carrying and article-storing body structure mounted thereon, said structure including spaced, transversely continuous, upper and lower main wall portions having respective upper and lower right and left projecting portions extending rearwardly from their main wall portions, said upper and lower main wall portions being curved transversely to shallow U-form to provide between them, and between their rearwardly projecting right and left portions, a water carrying chamber, and continuous top and end walls connecting the upper and lower main wall portions and the upper and lower rearwardly projecting portions and closing the chamber between them, the said projecting portions and connecting walls defining right and left chambered bays in liquid holding communication with the main chamber defined between the said transversely continuous wall portions, the rear portion of the end wall having a re-entrant U-shaped recess whereby to follow the rear contour of the said upper and lower right and left projecting portions and the upper and lower main wall portions therebetween, said re-entrant recess providing passenger receiving space including a platform mounted on said frame below said lower wall and having a portion forming a floor for said recess.

2. A fire truck as defined in claim 1 and further comprising tubular, longitudinally extending parallel frame members, and transversely extending bolsters lying between the tubular frame members and said lower wall portion, and welded to said frame members and said lower wall portion.

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