

July 1, 1930.

W. F. J. CASEY ET AL

1,769,490

TANK CAR

Filed April 6, 1929

2 Sheets-Sheet 2

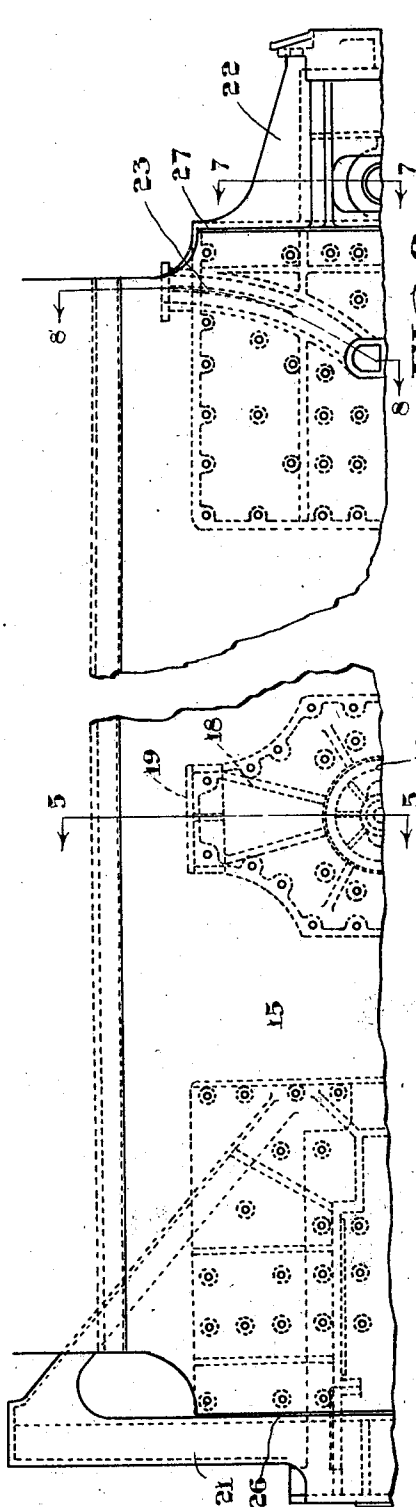


FIG. 2

FIG. 3

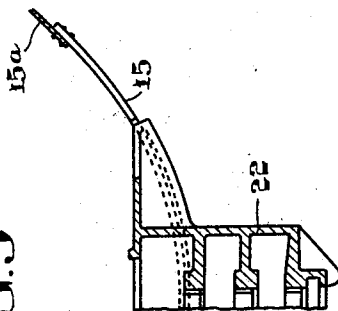


FIG. 4

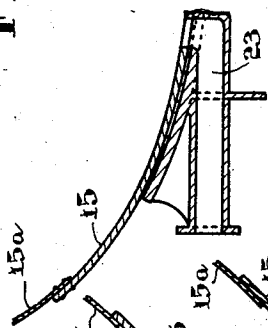


FIG. 5

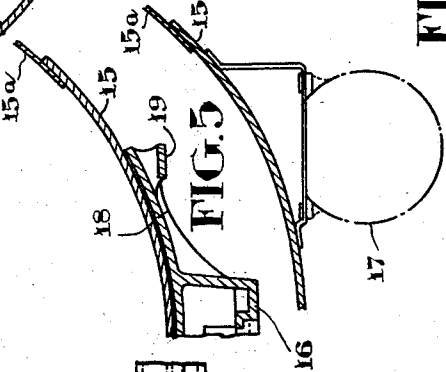


FIG. 6

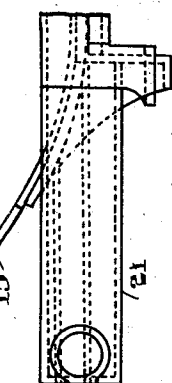


FIG. 7

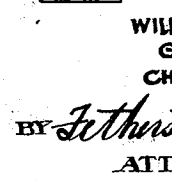


FIG. 8

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TANK CAR

Application filed April 6, 1929, Serial No. 353,101, and in Canada April 19, 1929.

This invention relates to new and useful improvements in railway rolling stock and particularly to the underframe construction of tank cars, locomotive tenders and the like.

According to our construction, the water and/or fuel tank is a preferably cylindrical structure having a thickened curved bottom plate which not only forms a portion of the cylindrical wall but constitutes the main framing member of the car. This bottom plate is curved to assist it in resisting longitudinal stresses and is sufficiently heavy to form the underframe, to which the centering casting, the air brake cylinder supports, the draft and buffer castings and other underframing fittings are all secured. This heavy curved bottom plate thus constitutes not only the whole under frame of the car but forms an integral part of the tank.

In the drawings which illustrate one embodiment of our invention,

Figure 1 is a sectional side elevation of a tender constructed according to our invention.

Figure 2 is a partial plan view of the bottom plate of the tank or frame of the tender at the rear thereof.

Figure 3 is a view similar to Fig. 2 at the front of the frame.

Figure 4 is a partial rear end view of the tender.

Figure 5 is a part sectional end view taken on the line 5—5 Figure 2.

Figure 6 is a part sectional end view of the tender frame showing the air brake cylinder support.

Figure 7 is a part sectional end elevation taken on the line 7—7 Figure 3.

Figure 8 is a part sectional end elevation taken on the line 8—8 Figure 3.

Referring more particularly to the drawings 11 designates the water and fuel tank which is of substantially cylindrical form having three spaced water filling openings 12 on the top thereof. Formed in the front end of the tank or shell is the fuel compartment 13 the rear end of which slopes downwardly and forwardly to guide the fuel towards the front of the tender. Suitable reinforcing members 14 extend around or partially

around the shell at spaced intervals. The bottom plate 15 of the tank constitutes the underframe of the tender and extends the full length and beyond the end plates, said plate being curved to form part of the cylindrical tank. It will be observed that this framing plate is made comparatively thick and is curved to give it added strength, as it is adapted to take the place of the usual heavy framing members used in the construction of tenders. Secured to the bottom plate in spaced longitudinal relation are the truck centering bearings 16 and also secured to the plate, intermediate the said bearings, is the air brake cylinder support 17. The bearings 16 have transversely extending arms 18 with surfaces 19 which engage with the usual side bearings of the truck. The truck construction is not shown in detail but its position is indicated by the wheels 20. Secured to the plate at the rear end of the water tank is the buffer casting or bearing 21 which carries the usual coupler mechanism (not shown). This bearing has a shoulder 26 against which the end of the plate 15 bears, to transfer the load direct to the plate. A combined draw bar and safety bar bearing 22 is secured to the plate 15 at the front end of the tender. This bearing 22 has also a shoulder 27 which butts against the end of the plate 15 in proximity thereto to directly transfer any forces to the plate which are exerted on the bearing. This bearing may have cast or formed integral therewith the water outlet or feed pipe 23. Suitable handrailings and platforms 24 and 25 are provided around the top of the tender to allow easy access to the various parts of the tank. The plates 15^a of the superstructure of the tank are secured to the framing plate 15 in any suitable manner.

It will be readily seen that by constructing the tender in the manner herein described unnecessary weight is avoided without sacrificing strength. The bottom curved plate being made comparatively thick dispenses with the heavy bottom framing members now in use. The tender may be very economically manufactured and by attaching the bearings for the draw bar and safety bar; the

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DRYING OR CARBONIZING MACHINE

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5 Sheets-Sheet 1

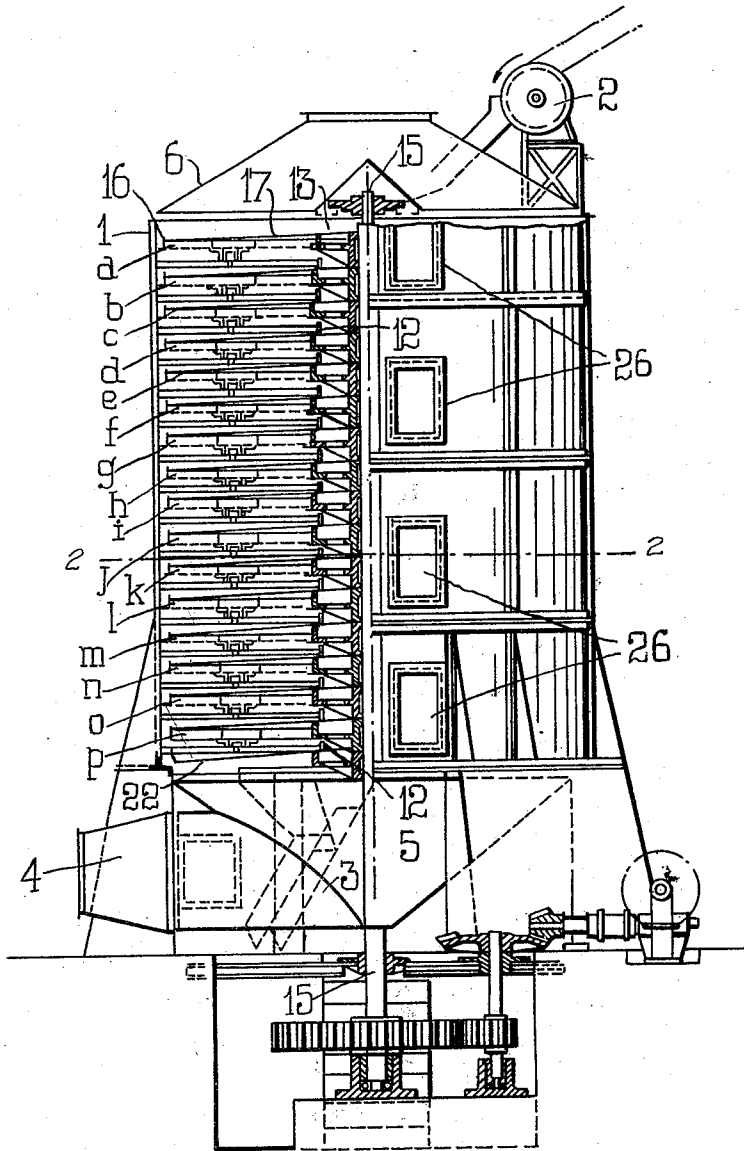


FIG. 1.
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