No. 745,392. PATENTED DEC. 1, 1903.

H. J. SMALL.

LOCOMOTIVE TENDER.

APPLICATION FILED JULY 28, 1903.

NO MODEL.

FIG. 3.

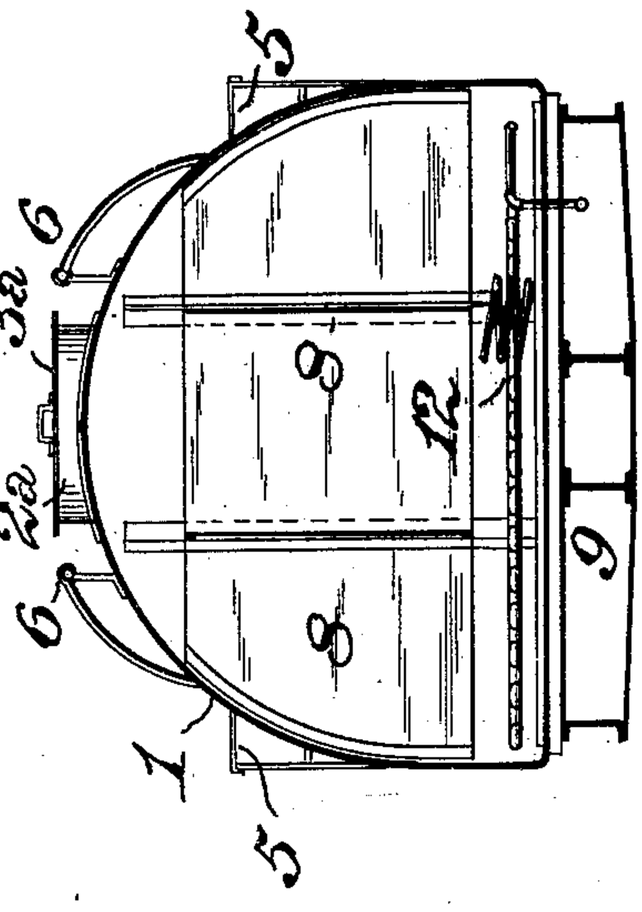


FIG. 1.

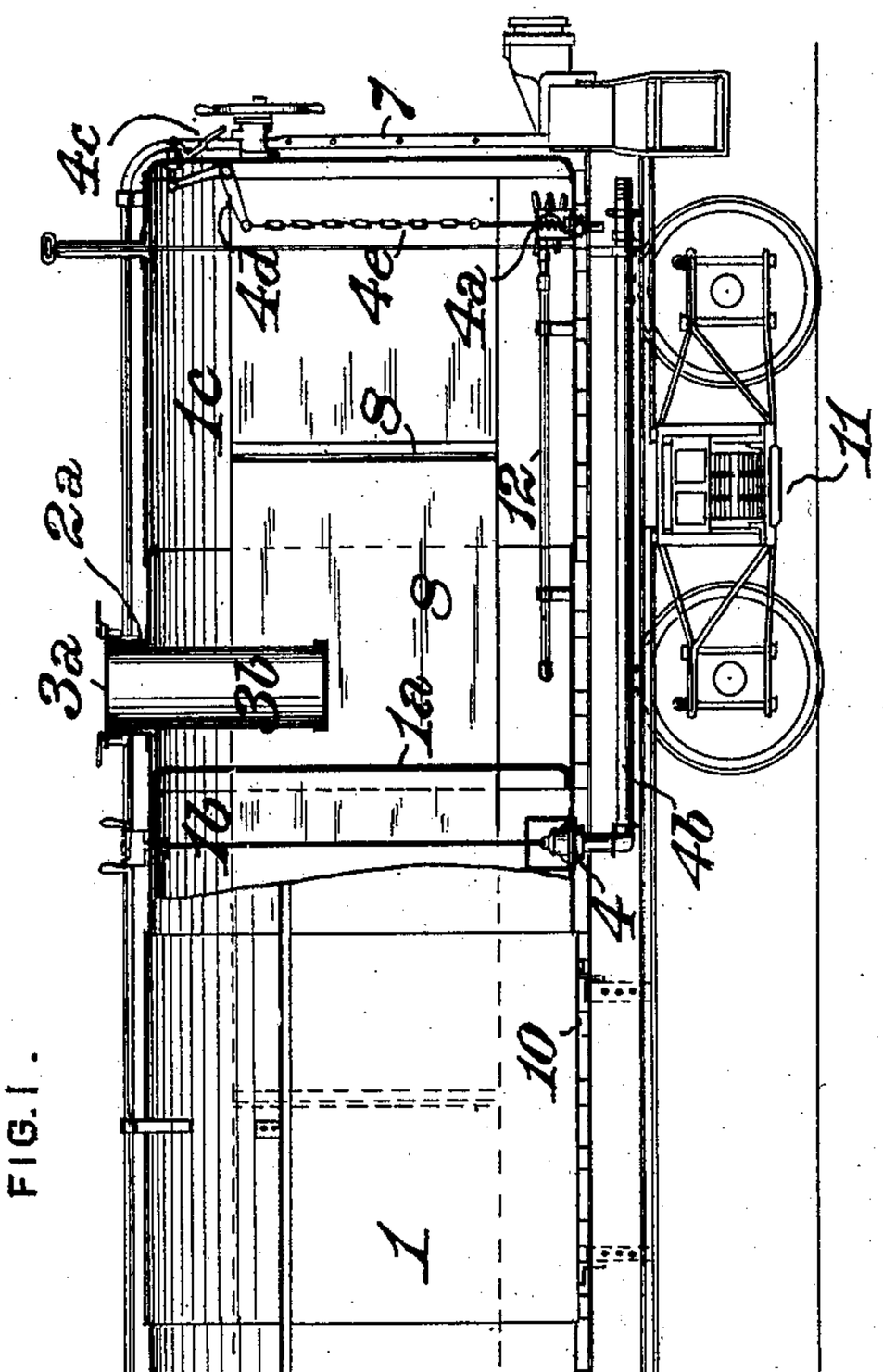
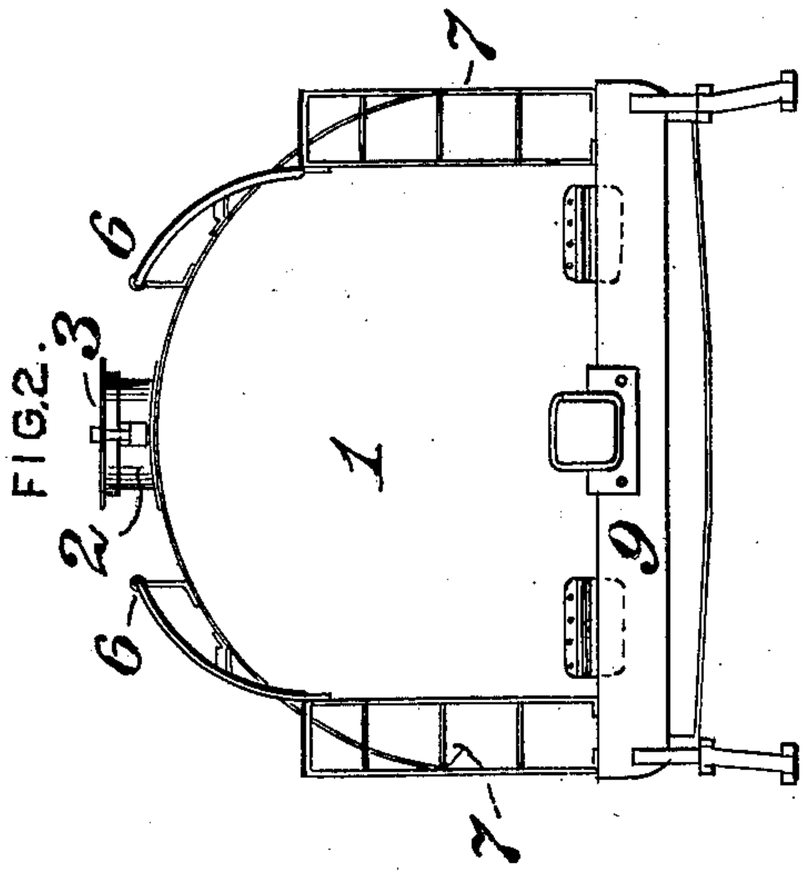


FIG. 2.



WITNESSES

James C. Herron.

S. R. Bell.

INVENTOR

Henry J. Small.

by Howson & Sell,

Att'y.

No. 745,392. Patented December 1, 1903.

UNITED STATES PATENT OFFICE.

HENRY J. SMALL, OF SAN FRANCISCO, CALIFORNIA.

LOCOMOTIVE-TENDER.

SPECIFICATION forming part of Letters Patent No. 745,392, dated December 1, 1903.

Application filed July 28, 1903. Serial No. 167,264. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. SMALL, of San Francisco, in the county of San Francisco and State of California, have invented a certain new and useful Improvement in Locomotive-Tenders, of which improvement the following is a specification.

The object of my invention is to provide a tender for oil-burning locomotives which shall afford the advantages of increased capacity within a given length and height and lower center of gravity than are attainable under the constructions heretofore employed, as well as the capability of firmer support of the tank upon and attachment to the frame upon which it is carried.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a view, partly in side elevation and partly in section, showing a tender for an oil-burning locomotive embodying my invention; Fig. 2, a rear view in elevation of the body of the same, and Fig. 3 a vertical transverse section through the oil-compartment.

In the practice of my invention I provide a body or tank 1, which is composed of plates of steel or wrought-iron securely riveted together on longitudinal and circumferential seams and is of D form in transverse section—that is to say, its bottom is substantially flat and the upper portion of its periphery is continuously curved. The curvature of the upper portion may either extend entirely to the bottom, as shown, and is deemed preferable, or the sides may be more or less flattened at and adjacent to their junction with the bottom, in the discretion of the constructor.

The interior of the tank 1 is divided by a transverse partition 1^a into a water-compartment 1^b and an oil-compartment 1^c of smaller volume, each of which is fitted with longitudinal and transverse dash-plates 8 to prevent swaying of large volumes of liquid. The water-compartment 1^b is provided with an upper dome 2 and cap 3 for supplying it with water and for access to its interior and with one or more lower discharge-valves 4, each of which is connected to a supply-pipe 4^b for connection with an injector or feed-pump pipe on the locomotive. An upper dome 2^a, fitted with a removable cap 3^a, is formed on the oil-compartment 1^c, and a strainer 3^b extends from the dome downwardly into the tank. The dome of the water-compartment may also be fitted with a strainer, if desired. An oil-discharge valve 4^a, located in the bottom of the oil-compartment and operated by a lever 4^c on the front of the tank through a bell-crank 4^d and chain or rod 4^e, controls a pipe adapted for connection with the burners on the locomotive, and heater-pipes 12 are located in the lower portion of the oil-compartment for heating the oil by steam prior to its supply to the burners.

Longitudinal running-boards 5 for the use of trainmen in passing from end to end of the tender are located on opposite sides of the tank below its top, and a hand-rail 6 is provided for each running-board. Access to the running-boards is afforded by ladders 7, located at each of their ends.

The tank is supported upon a substantial frame 9, which is composed of longitudinal and transverse beams of any preferred form and may be either of wood or metal. The tank or body 1 is firmly secured to the frame through the intermediation of angles 10, and it will be seen that by reason of the flat form of the bottom of the tank a strong and rigid connection of the body and frame of the tender is effected. The tender is carried on swiveling trucks 11, located adjacent to its ends and provided with proper brake mechanism, and as these appliances are familiar to those skilled in the art and do not form in and of themselves part of my present invention they are not herein at length set forth.

It will be seen that under the above-described construction the center of gravity of the tender is lower than in those of the ordinary cylindrical form and also that greater capacity is afforded within any given length and height. No chocks or sockets are required for seating the body on the frame, and the body and frame may be more firmly and effectively secured together than in the case of a cylindrical body. The tender embodies the further advantage that in the special service for which it is designed the provision of separate compartments for oil and water in a single tank or body provides a

much stronger and more compact construction than those in which separate receptacles for oil and water are employed.

I claim as my invention and desire to secure by Letters Patent—

1. In a tender or car for the transportation of water and fuel-oil, the combination of a body or tank composed of connected metal plates and of substantially D transverse section, a transverse partition dividing the body into a rear water-compartment and a forward oil-compartment, means for independently supplying and discharging said compartments, a frame on which the body rests by its flat bottom and to which it is connected, and wheels supporting the frame and body.

2. In a tender or car for the transportation of water and fuel-oil, the combination of wheels, a frame supported thereon, a body or tank connected to, and extending across the available width of, the frame, and composed of metal plates so connected as to form a D transverse section, a transverse partition dividing the body into a rear water-compartment and a forward oil-compartment, and means for independently supplying and discharging said compartments.

3. In a tender or car for the transportation of water and fuel-oil, the combination of wheels, a frame supported thereon, a body or tank connected to, and extending across the available width of, the frame, and composed of metal plates so connected as to form a D transverse section, a transverse partition dividing the body into a rear water-compartment and a forward oil-compartment, longitudinal and transverse dash-plates fixed in said compartments, and means for independently supplying and discharging said compartments.

4. In a tender or car for the transportation of water and fuel-oil, the combination of wheels, a frame supported thereon, a body or tank connected to, and extending across the available width of, the frame, and composed of metal plates so connected as to form a D transverse section, a transverse partition dividing the body into a rear water-compartment and a forward oil-compartment, means for independently supplying and discharging said compartments, and a running-board and hand-rail extending longitudinally on the curved upper side portion of the body.

HENRY J. SMALL.

Witnesses:
HERMAN H. HUMMEL,
RALPH N. TIDD.