No. 852,509. PATENTED MAY 7, 1907.

F. L. HORSPOOL.

LOCOMOTIVE TENDER.

APPLICATION FILED JULY 20, 1904.

3 SHEETS—SHEET 1.

Fig. 1.

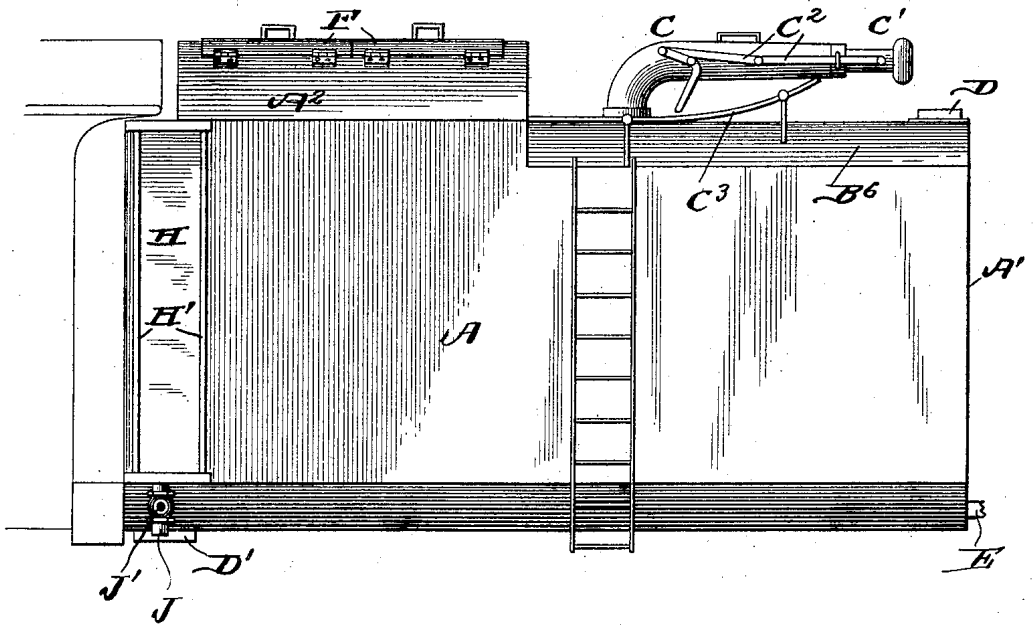
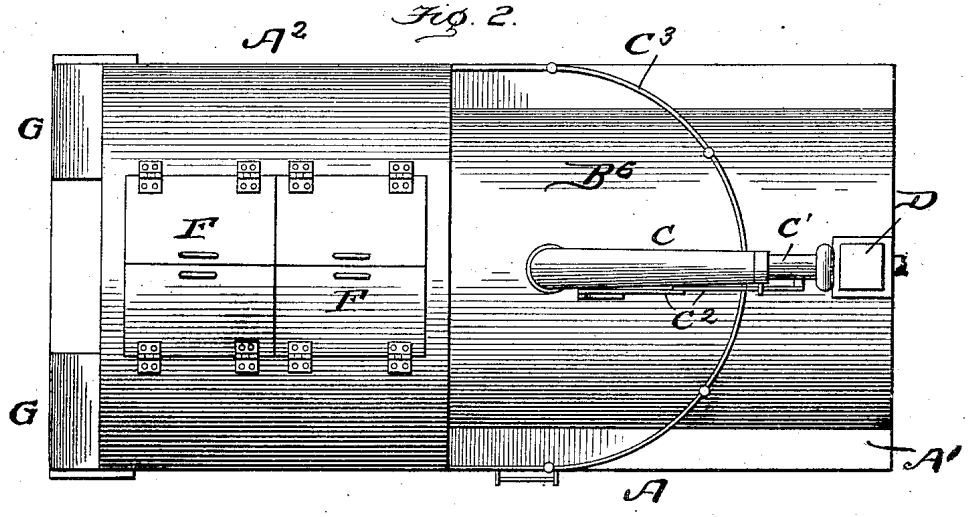


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

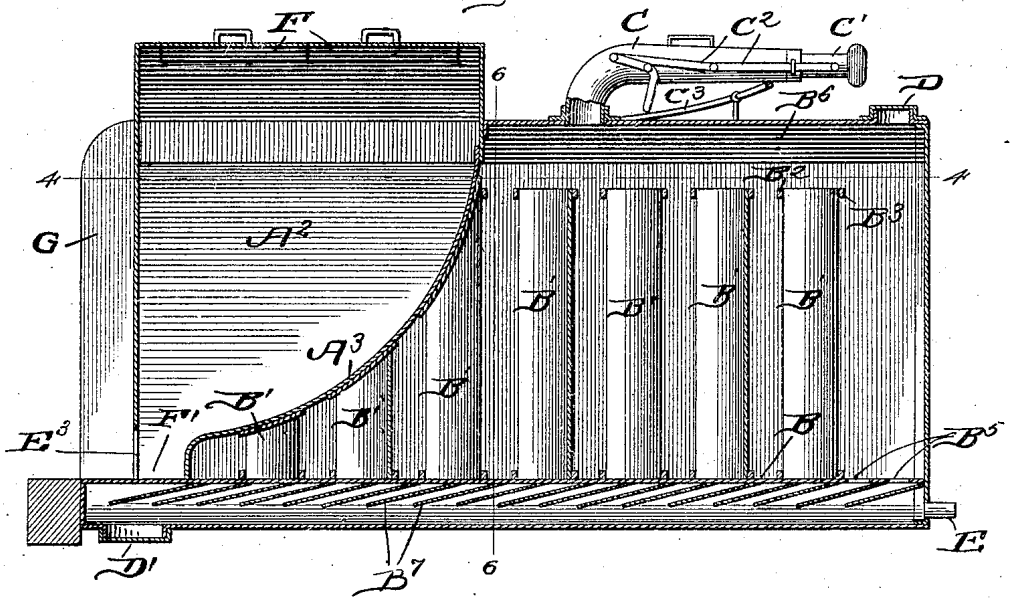
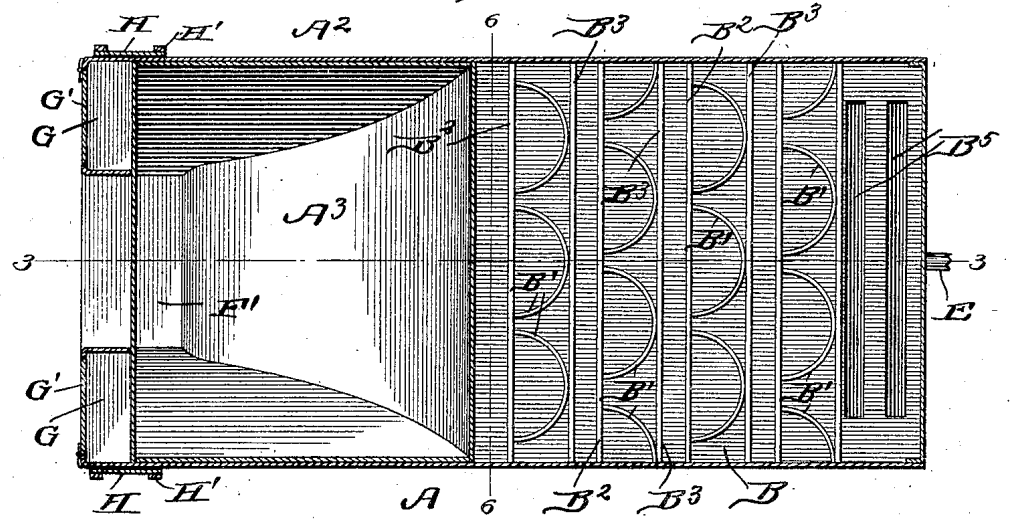


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

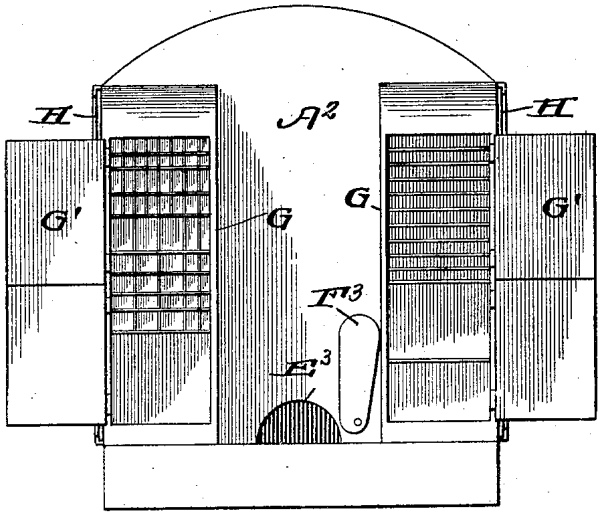
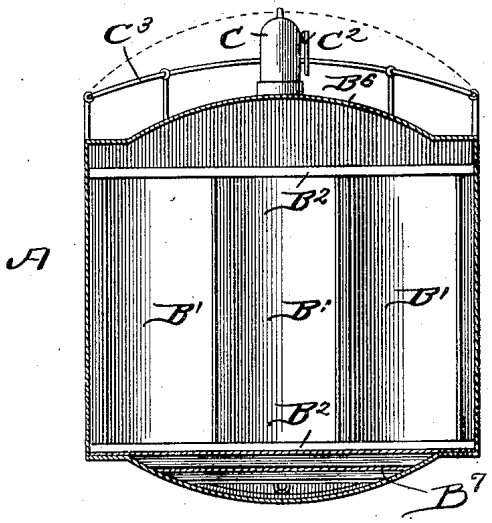


Fig. 6.



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UNITED STATES PATENT OFFICE.

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LOCOMOTIVE-TENDER.

No. 852,509. Specification of Letters Patent. Patented May 7, 1907.

Application filed July 20, 1904. Serial No. 217,432.

To all whom it may concern:

Be it known that I, FRANCIS LEROY HORSPOOL, a citizen of the United States, residing at Cheyenne, in the county of Laramie and the State of Wyoming, have invented a new and useful Improvement in Locomotive-Tenders, of which the following is a specification.

My invention relates to water and coal carrying tenders for use with locomotives, and the object is to provide a tender having a false bottom so that cinders etc. will not reach the injector pipe, to provide braces which will serve to strengthen the water tank and at the same time prevent the water from pounding from side to side of the tank, and to provide clothes and tool receptacles on each side of the coal way.

My invention consists of the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claims and shown in the accompanying drawings, in which,

Figure 1 is a side elevation of my tender. Fig. 2 is a plan view. Fig. 3 is a longitudinal section, on line 3—3 of Fig. 4. Fig. 4 is a horizontal section on the line 4—4 of Fig. 3. Fig. 5 is an end elevation. Fig. 6 is a transverse section on the line 6—6 of Fig. 4.

In these drawings A represents the tender which is divided into a rear water-tank portion A′ and a forward coal bunker portion A^2, having a forwardly curved bottom A^3 and the tank portion A′ extends under the greater portion of the coal bunker. The tank A′ has a false bottom B on which is arranged a plurality of semi-cylindrical braces B′. These braces are arranged in transverse rows as clearly shown in Fig. 4 and each row is held in position, the various rows being spaced apart, by the transversely arranged bars, B^2 and B^3, the bars B^2 connecting the front vertical edges of the braces in each row and the bars B^3 being connected to the curved backs of the braces, and both bars B^2 and B^3 are connected at their ends to the sides of the tender.

The false bottom is cut away as shown at B^5 to the rear of the rearmost row of braces B′. As shown in Fig. 3 the water tank extends under the coal bunker and in this portion of the tank the braces B′ serve also as supports for the bottom of the bunker. To nate short of the top of the tender, which top is longitudinally arched as shown at B^6. The arrangement of braces as shown and described acts not only as braces for the tank but also as water breakers and prevent the sloshing and rolling of the water from side to side and end to end of the tank in rounding curves, running from an ascending to a descending grade etc.

B^7 represents forwardly extending baffle plates carried by the false bottom B for the purpose of directing the flow of water forwardly and to deposit the sediment upon the bottom of the tender.

Swingingly pivoted to the top of the arch B^6 and immediately to the rear of the coal bunker is a feed pipe C opening downwardly into the tank A′. This pipe is curved rearwardly over the tank and normally extends over and parallel with the longitudinal axis of the tender. The pipe has a sliding nozzle C′ and a series of pivoted links C^2 connect the nozzle to the pipe C and a bell crank pivoted to the pipe C and having the free end of one of its members pivoted to the free end of the forward link serves to actuate the links and the nozzle and thus extend the length of the pipe C which can also be swung from side to side and rests adjacent its end on a railing C^3 which curves around and over the arched roof of the tender. The tank is also provided with a man hole D in the top adjacent the rear end through which the tank can be filled by pulling down the spout of the main water tank. In the real bottom at the forward end of the tank is a man hole D′ and a cock E is arranged at the rear and by attaching a hose to the said cock the space between the false and real bottoms can be washed out and the dirt and cinders discharged through the man hole D′.

The coal bunker A^2 has a plurality of hinged doors F in the top, opening upwardly and outwardly. By closing these doors the coal is prevented from falling off of the car when filled full and prevented from getting too wet in rainy weather, or covered with snow. The coal slides down the inclined bottom of the bunker and escapes into the coal gangway F′ through an opening E^3 which may be entirely or partially closed by the slide F^3 and the amount of coal delivered into the gang-way regulated. On each side of the gangway,

cally arranged boxes G having doors G′ and racks therein adapted to receive tools, clothes, oil cans etc. On the sides of the tender adjacent the forward end are arranged slides H adapted to be moved between standards H′ so as to cover or close the space between the tender and the engine.

Owing to the manner in which this tender is constructed it can be built of considerable size and of a greater capacity than in the case of tenders in which the water is permitted to move freely from one end to the other. The entire construction is compact and convenient.

In use the feed pipe C swings around over the top of the tank on the rod C^3 and is connected to the water tank by the lever C^2, which holds the parts C and C′ in horizontal alinement and the pipe or nose C′ is pushed out by the lever C^2 to connect with the water tank arranged by the side of the track. The fireman, therefore, does not have to draw down a spout such as is usually connected to wayside tanks, as the nose C′ connects directly with a suitable opening or pipe carried by the wayside tank. In case water is supplied to the tender at any point where it is not possible to connect the nose C′ to a wayside tank the tender can be filled by means of a hose through the man-hole D.

On opposite sides of the tender near the front end are arranged injector pipes J controlled by valves J′, which pipes open into the tender below the false bottom, and are connected to the injectors on the engine by means of flexible hose, not shown, as the hose forms no part of my invention and is common in air brake appliances.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A tender divided into a water tank and a coal bunker, the latter having a forwardly inclined bottom and the water tank extending under the bunker, and a plurality of semi-cylindrical braces arranged vertically in the said tanks, as and for the purpose specified.

2. A tender comprising a coal bunker having a curved downwardly and forwardly extending bottom, a tank compartment to the rear of and extending under the bunker, parallel bars arranged transversely across said tank compartment, semi-cylindrical braces arranged in transverse rows on the bottom of the compartment and held between the bars, the said braces at the rear of the bunker stopping short of the top of the tank and those under the bunker supporting the bottom of the bunker, as and for the purpose set forth.

3. A tender having a false bottom and an arched roof and divided into a coal bunker and a water tank, the bunker having a downwardly and forwardly curved bottom and the tank extending under said bunker, semi-cylindrical braces arranged vertically on said false bottom adapted to check the flow of water from one end of the tank to the other, the false bottom having opening arranged therein to the rear of the said braces, and an injector pipe leading from the front of the tank below the false bottom.

4. A tender of the kind described, coal bunkers, a water tank, said bunker having a curved, downwardly and forwardly inclined bottom, an arched roof over the bunker, hinged doors in said roof, an opening at the front end of the bunker adjacent the bottom, a pivoted slide adapted to close said opening, boxes arranged on either side of said opening, said boxes forming the sides of a gangway, doors hinged to the front of the boxes, and racks arranged in the boxes, all as and for the purpose set forth.

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Witnesses:
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