H. J. Lombaert.

Freight Car.

No. 49,901. Patented Sept. 12, 1865.

Fig. 1.

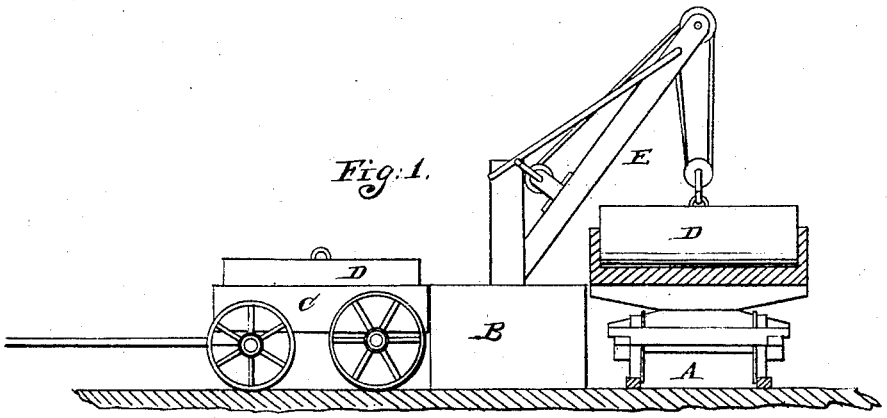


Fig. 2.

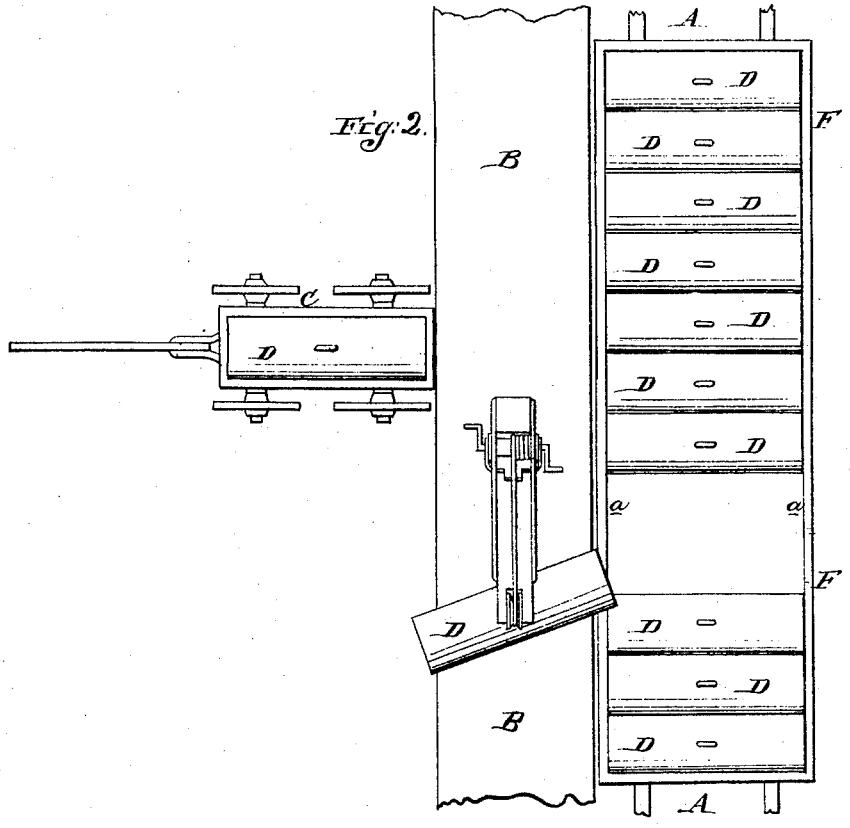
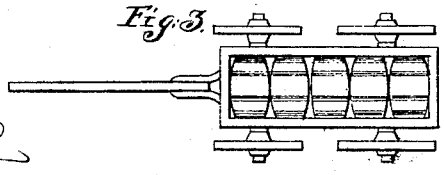


Fig. 3.



WITNESSES:

Wm. Albert Lee
John Parker

INVENTOR:

H. J. Lombaert.
By his Atty
H. Howson

UNITED STATES PATENT OFFICE.

HERMAN J. LOMBAERT, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN THE TRANSPORTATION OF PETROLEUM.

Specification forming part of Letters Patent No. 49,901, dated September 12, 1865.

To all whom it may concern:

Be it known that I, HERMAN J. LOMBAERT, of Philadelphia, Pennsylvania, have invented an Improvement in the Transportation of Petroleum; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of an economical mode, fully described hereinafter, of transporting petroleum from the oil-wells to the seaboard.

In order to enable others to practice my invention, I will now proceed to describe the manner of carrying it into effect.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of part of a railway-track and appliances for carrying out my invention; Fig. 2, a vertical section on the line 1 2, Fig. 1.

Before describing the mode of carrying out my improvement, it will be proper to allude to the ordinary method of transporting petroleum to the seaboard.

Wooden barrels weighing when empty about seventy pounds, and of capacity sufficient to contain about forty-one and six-tenth gallons, are in general use for holding petroleum, the barrels being filled at the oil-wells and conveyed thence to adjacent railways in two-horse wagons constructed to hold five barrels. In nearly all cases these barrels are owned by the purchasers of and dealers in petroleum, who purchase the oil from the wells, and not by the proprietors of the latter. From the wagons the barrels are transferred to open cars and conveyed to the seaboard, to be there emptied of their contents, retransferred to the cars, and on arrival at the depot nearest to the wells conveyed to the latter in the said two-horse wagons. In some localities the petroleum is conveyed from the wells in bulk by means of tank-barges to central localities, where it is deposited in barrels prior to being conveyed to the seaports. It has been proposed to transport petroleum in bulk on railways by tank-cars especially designed for the purpose; but correct calculations have demonstrated the fact that any slight advantages which might be derived from this mode of transportation would not compensate for the difficulties and expenses incurred in establishing such a mode of conveyance.

As the two-horse wagons in present use are well adapted to the carrying of the moderate load of five barrels over the rough roads of the oil regions, and as vast numbers of these wagons are now in use, I propose to retain them as one of the features in carrying out my invention. The use of the barrels I however dispense with, and in their place adopt cylindrical tanks, to be owned by the railway or other companies, each tank being, by preference, seven feet long and two feet three inches in diameter, (inside measurement,) the thickness of the metal being one-eighth of an inch, and the total outside length, including the heads, seven and one-half feet. A tank of these dimensions will be of the same weight and capacity as five ordinary oil-barrels, the total weight of the tank being three hundred and fifty pounds and the total capacity two hundred and eight gallons. One of these tanks is, as regards dimensions, weight, and capacity, an appropriate load for one of the ordinary two-horse wagons now in use.

In the accompanying drawings, A represents part of a railway-track, forming a siding of or turn-out from the main line, and adjacent to this track a platform, B, may be erected.

F is a truck-car of such a width that the metal tanks D can be arranged transversely and fit snugly between the sides *a a*, the length being such that the car will contain a number of the tanks arranged side by side and in contact with each other, so as to prevent them from rolling about. I prefer a car of sufficient length to contain twelve tanks, which, when filled with oil, will weigh about twelve tons—the ordinary load of a truck-car.

C represents the two-horse wagons, such as is now commonly used for conveying five barrels to and from the wells; and E is an ordinary swivel-crane, by means of which the tanks filled with oil may be transferred from the wagon to the car and empty tanks from the latter to the wagon, the empty tanks being filled at the wells without removing them from the wagon. After the truck-car has received its entire load it is transported with other loaded cars directly to the seaboard, where the contents may be transferred to barrels or other

vessels for exportation or stored in large reservoirs for future disposal, the cars, with the empty tanks, returning for a new load.

It will be seen that the above-described mode of transporting petroleum demands neither the abandonment of the usual two-horse wagons nor any radical or expensive alterations of the ordinary truck-cars; that the expenses incurred in removing and repairing barrels, the losses by the leakage of the same, and the danger of conflagration are avoided; and that the delay and excessive labor required by the present mode of conducting the transportation of petroleum through the medium of barrels, which have to be repeatedly removed from one conveyance to another, are saved.

The following calculation will also tend to demonstrate the advantages of my invention: The cost of one tank of the above dimensions will be fifty dollars, estimating the number of trips per year at twenty-five. It would carry in that time five thousand two hundred gallons, and would earn, at a charge of one and one-half cents per gallon, seventy-eight dollars. The present cost of transporting petroleum in ordinary barrels, including wastage, insurance, repairs, &c., amounts to from five to seven cents per gallon. Twelve hundred tanks would carry six million two hundred and forty thousand gallons per annum, would cost, at the rate of fifty dollars per tank, sixty thousand dollars, and earn ninety-three thousand six hundred dollars.

It will be evident that the tanks constructed and owned by the railway companies would be a source of profit to the same, while the expense of the costly array of barrels would be saved to the purchasers of and dealers in petroleum.

I wish it to be understood that I do not desire to claim, either wholly or in part, the method of transporting oil for which Letters Patent of the United States were granted to W. W. Horton on the 21st day of March, 1865; but

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

The use for transporting petroleum of truck-cars and portable metal tanks, when the latter are of such weight, dimensions, and capacity that one tank will form an appropriate load for an ordinary two-horse oil-wagon, and when the truck-cars are so constructed as to hold and steadily retain a given number of said tanks, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERMAN J. LOMBAERT.

Witnesses:
HENRY HOWSON,
W. J. R. DELANY.