J. F. Keeler.

Oil & Paint Vessels.

No. 45,834. Patented Jan. 10, 1865.

Fig. 1.

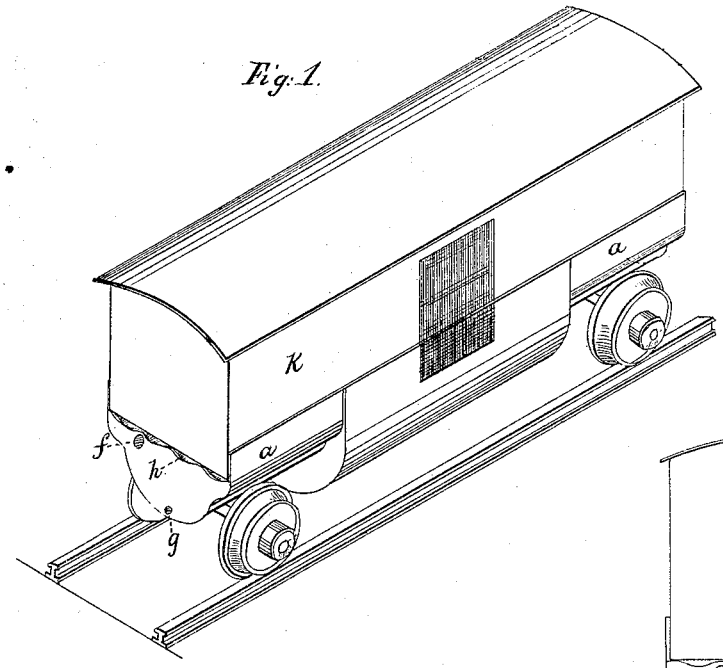


Fig. 3.

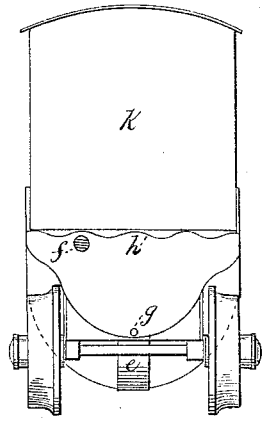


Fig. 2.

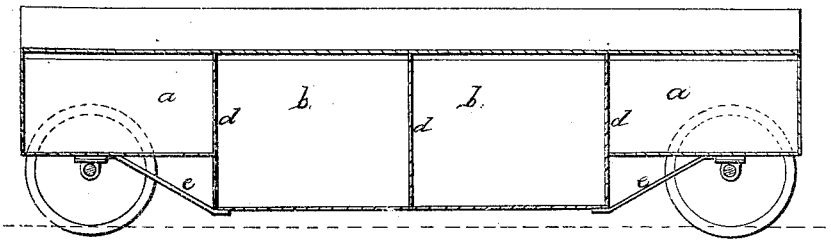
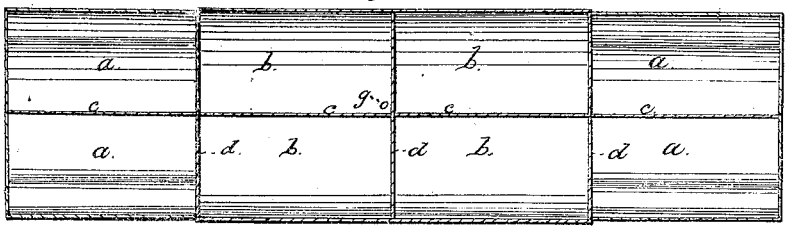


Fig. 4.



Witnesses.
Samuel Graham.
Frank W. Kennedy.

Inventor.
J. F. Keeler

UNITED STATES PATENT OFFICE.

JOEL F. KEELER, OF PITTSBURG, PENNSYLVANIA.

IMPROVED MODE OF CONSTRUCTING RAILROAD-CAR TRUSSES.

Specification forming part of Letters Patent No. **45,834**, dated January 10, 1865.

To all whom it may concern:

Be it known that I, JOEL F. KEELER, of Pittsburg, in the county of Allegheny, in the State of Pennsylvania, have invented a new and Improved Mode of Constructing Railroad-Cars, fitting them for the transportation of liquids without detracting from their capacity for stowing and transporting other freight; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, like letters in the several figures referring to like parts.

The nature of my invention consists in constructing the bottom or truss of a railroad-car of sheet-iron, with suitable bulk-heads, &c., and connecting it with the trucks or running-gear in such a manner that said bottom or truss will drop partly below the top of the wheels, and between them, more especially near the middle of the car, thus affording space for holding a sufficient amount of liquids to nearly or quite freight the car, while leaving about the usual space in the car for other articles above the truss.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my car in any of the known forms and modes, (except as herein specially described as differing therefrom,) and apply to them wheels and axles, or trucks with two or more wheels, as I deem advisable, together with springs, bumpers, brakes, and other appendages of railroad-cars; but in order to fit them for the transportation of liquids in bulk without unfitting them for other freight, I make the bottoms of the cars of sheet-iron, (either black or galvanized,) and usually of a semi-circular or ogee-shape on the under side, as shown in Figures I and III, securing thereby the greatest lateral and perpendicular strength with space and shape, permitting the bottom of the car to drop between the wheels.

In order to secure greater carrying capacity, both of space and strength, I usually make the middle of the car-bottom the deepest, as shown in Figs. I and II at *b b*. To increase this strength still further, I insert diaphragms or bulk-heads at *c* and at *d*, the former longitudinally, the others crosswise. I also add the trusses E E, as needed. The upper part of the truss, or what is usually the car-bottom, I make of sheet-iron corrugated longitudinally, which strengthens the truss and stiffens the floor. I also cover this corrugated floor with boards running crosswise at pleasure. The corrugations are shown at *h h*. When a box or house, *k*, is placed on the truss it is firmly attached to the truss, and helps to strengthen it. The several compartments have holes to permit the contents, when desired, to flow together or to be closed, and the contents of each kept separate. Holes at *g g*, with stop-cocks, tubes, &c., permit the contents to be drawn off readily, while man-holes *f f* allow of speedy filling, cleaning, &c., which are closed in the usual way. The advantages of this construction are so obvious as scarcely to need stating. The immense amount of oil and other liquids now transported in barrels at a vast expenditure for the barrels, and a still greater loss in leakages requires this or some similar invention to obviate them. The joints of this truss are not only lapped and riveted, but also soldered. When the iron is thick enough to permit it, they are calked. Leakage, therefore, is provided against in every possible way.

What I claim, and desire to secure by Letters Patent of the United States, is—

The railway-car truss constructed and used substantially in the manner and for the purposes set forth.

JOEL F. KEELER.

Witnesses:

SAMUEL GRAHAM,

F. W. KENNEDY.