J. E. LEEPER.

Improvement in Construction of Cars.

No. 116,069. Patented June 20, 1871.

Fig: 1.

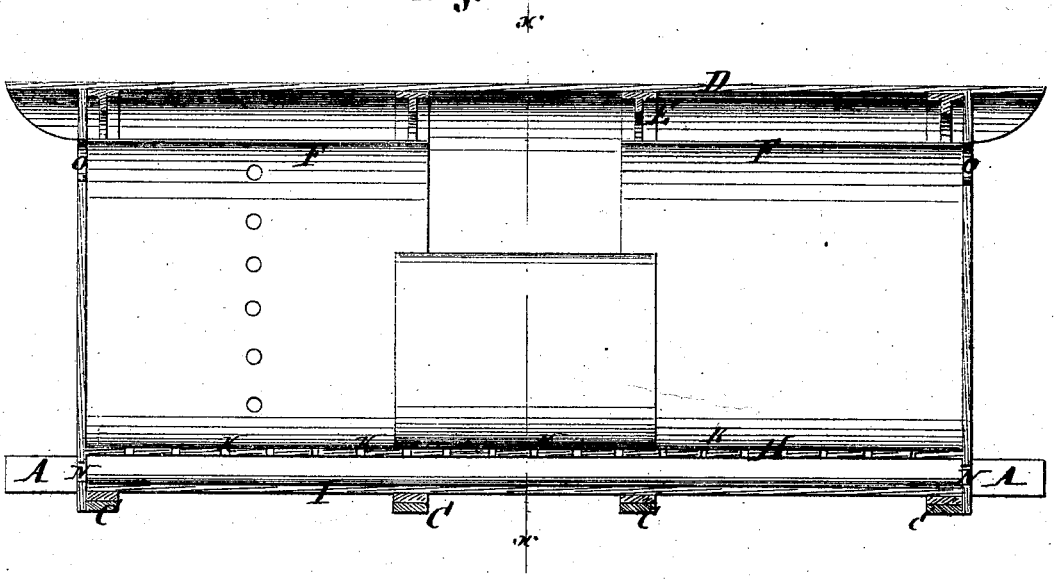
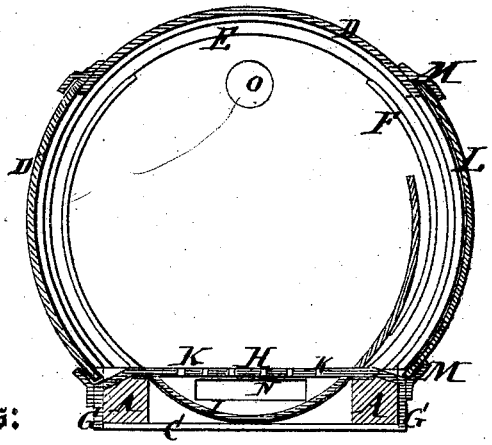


Fig: 2.



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UNITED STATES PATENT OFFICE.

JOHN E. LEEPER, OF GODFREY, ILLINOIS.

IMPROVEMENT IN CONSTRUCTION OF CARS.

Specification forming part of Letters Patent No. 116,069, dated June 20, 1871.

To all whom it may concern:

Be it known that I, JOHN E. LEEPER, of Godfrey, in the county of Madison and State of Illinois, have invented a new and useful Improvement in Construction of Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in the construction of freight and other cars; and it consists in a novel manner of making the car-bodies, mainly in tubular form and of sheet metal, except a supporting-frame or platform.

Figure 1 is a longitudinal section. Fig. 2 is a transverse section taken on the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

The frame or platform is composed of the two long parallel beams A, tied together by the cross-bars C, and the body consists of the outer shell of sheet-metal plates B bent over the T-ribs E, and an inner shelf, F, similarly fitted to the inner sides of the said ribs. The ribs rest at the ends on the timbers, and are firmly attached to them, and spring over from one to the other in a true circle. The outer sheets meet the beams at the upper outer corners, extend down the sides therefrom, as indicated at G, and are attached thereto. The ribs E are arranged as far apart as the width of the sheets, which are joined thereto and secured by riveting or any other means. H represents a level floor stretching from side to side above the beams and resting thereon, and I is a curved plate suspended between the said beams below the floor to form an air-passage for admitting air from the ends along under the floor, to rise up into the car through holes therein, as indicated at K, and between the outer and inner shell. The inner shell F is also designed to be perforated for allowing air to enter between the two walls above the contents, and pass down into said contents, when of grain or other like substance, through the perforations below the grain; or air may enter the spaces from below the bottom H, the latter being supported above the beams and passages provided between it and the beams. This inner shell may extend only part way over the top, or wholly, as preferred. The doors L may be arranged to slide in guides M, or they may be hinged to the outer shell D to swing outward, as may be preferred. The air may be admitted to the space between the floor H and plate I through openings N at the ends, or through openings O higher up, and be conducted downward to the said space by pipes.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the beams A, cross-bars C, outer and inner sheet-metal shells D F, and the T-ribs E, all substantially as specified.

2. The combination, with the above, of the perforated floor H and the concave plate I, substantially as specified.

3. The bottom H and the inner shell F, being perforated and having the air admitted to them from the space below the floor, all substantially as specified.

JOHN E. LEEPER.

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