

# JOHN W. GRIFFITHS. Improvement in Railroad-Cars.

No. 114,675.

Patented May 9, 1871.

fig. 1.

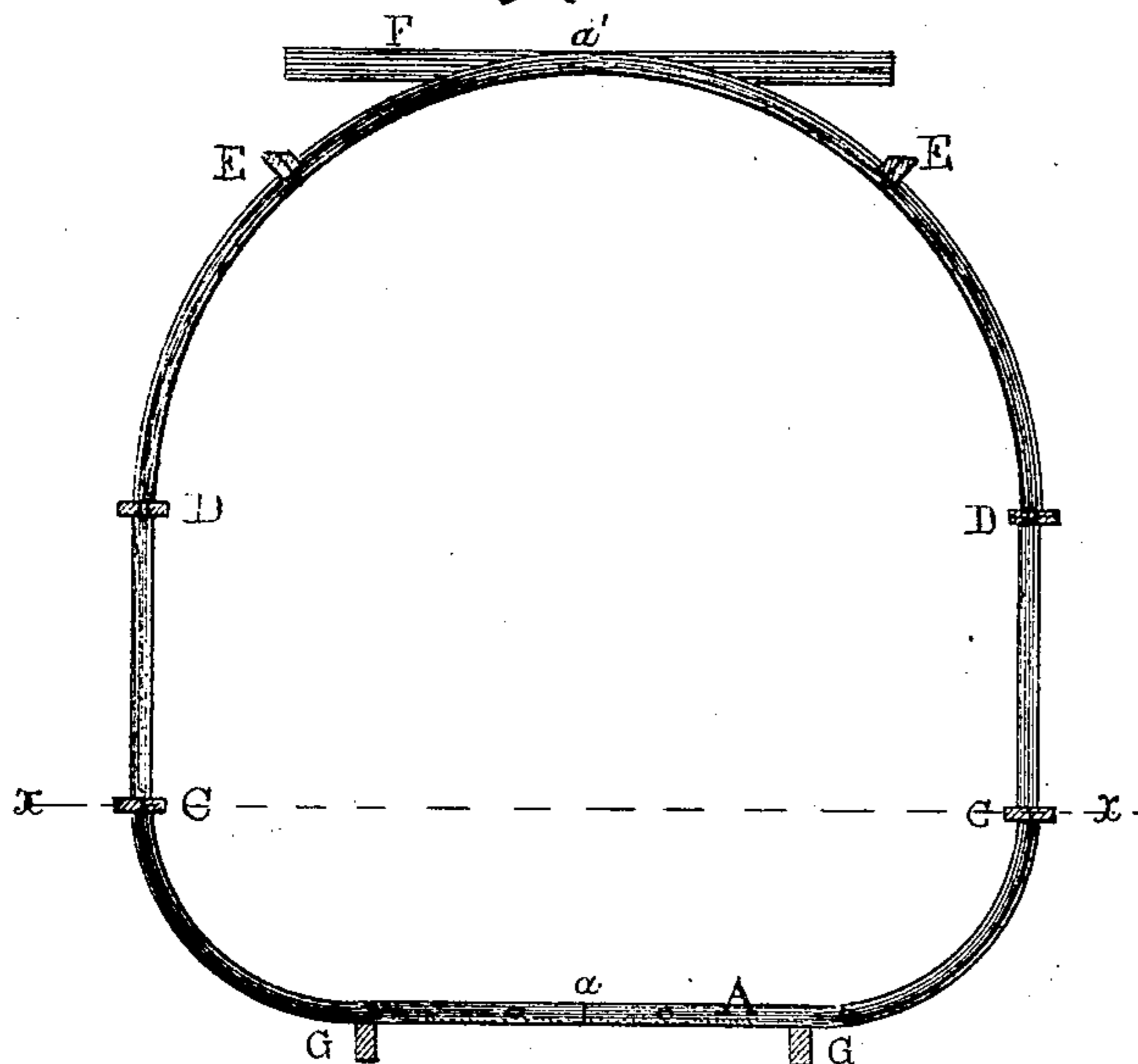


fig. 2.

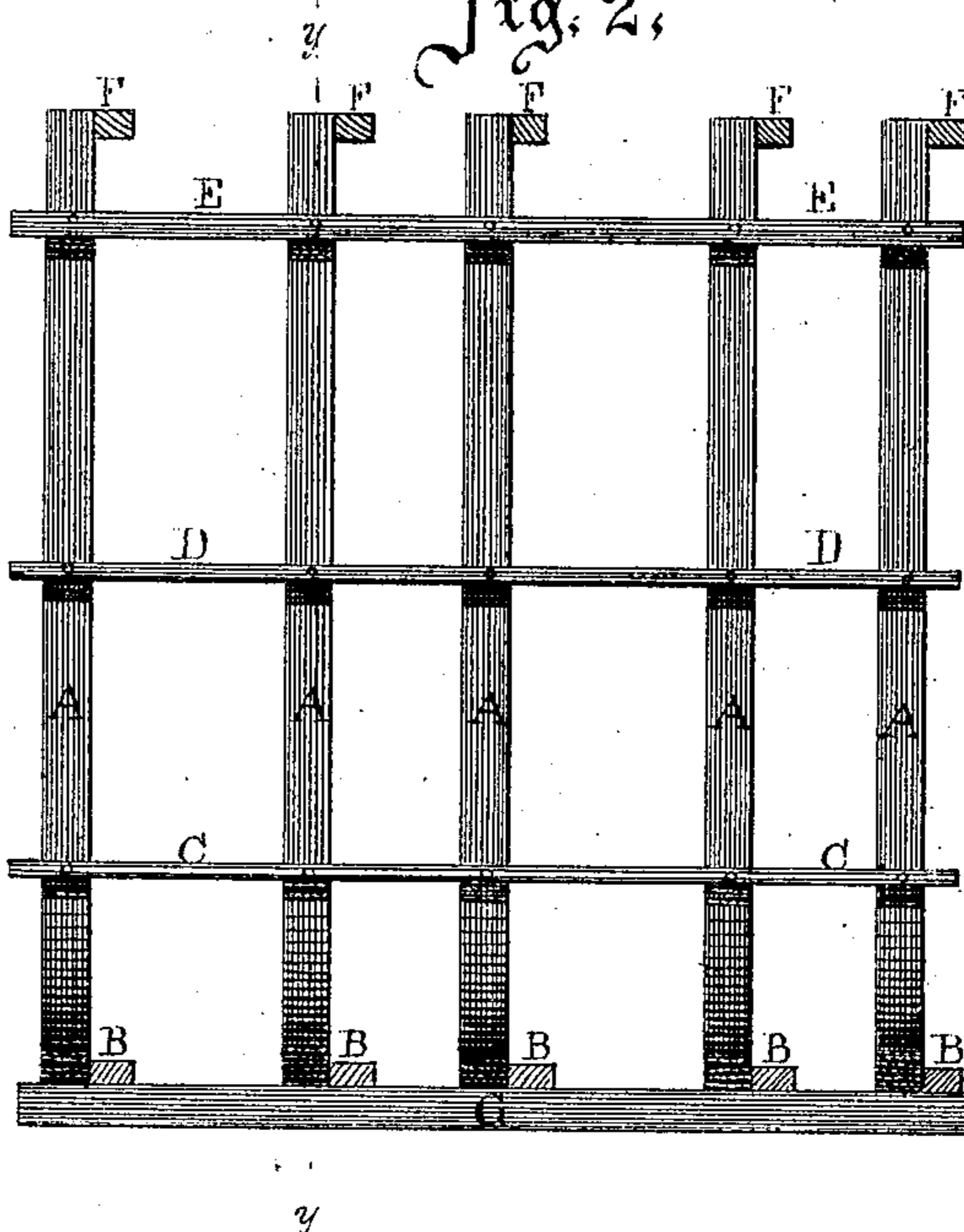


fig. 3.

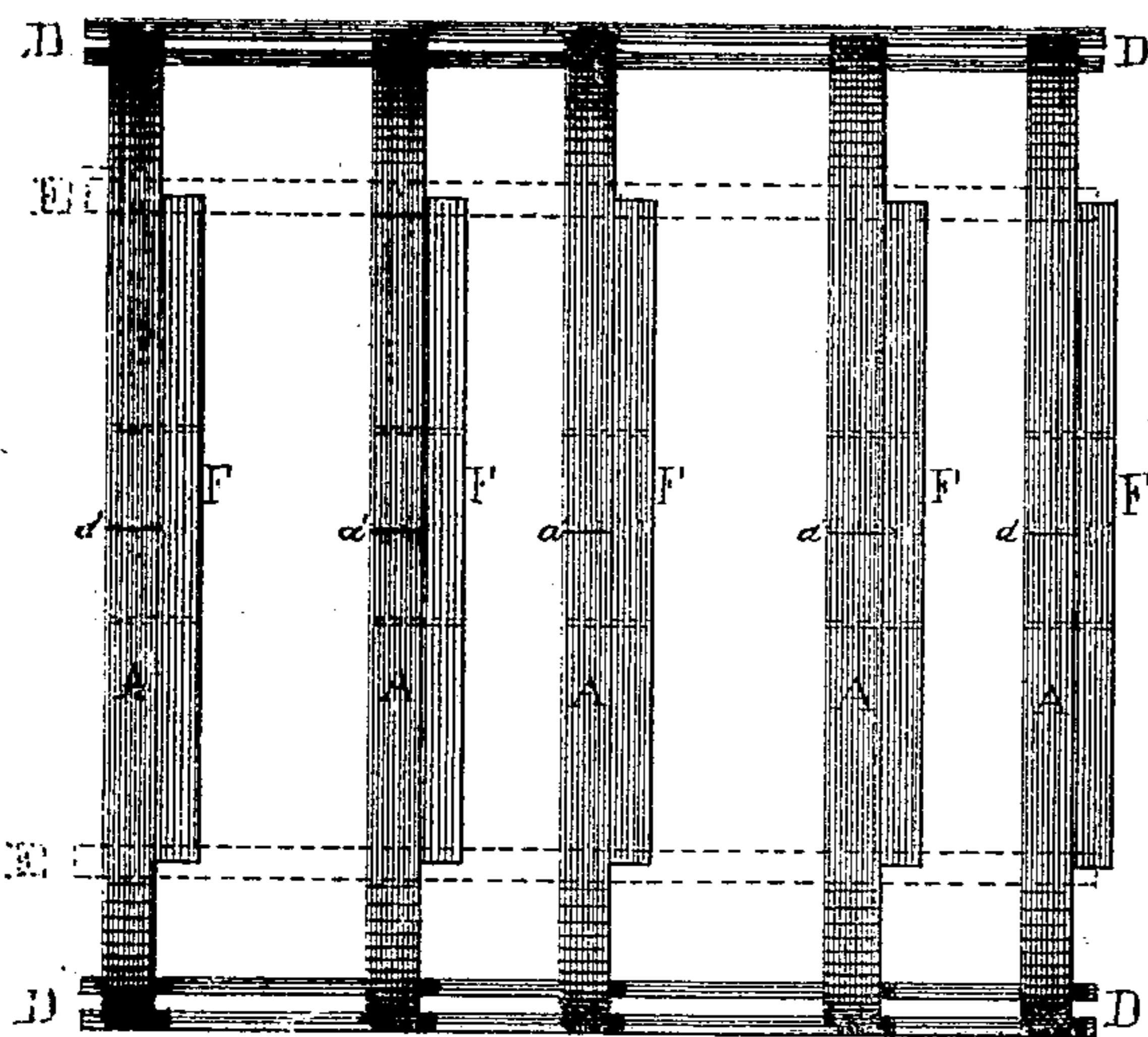
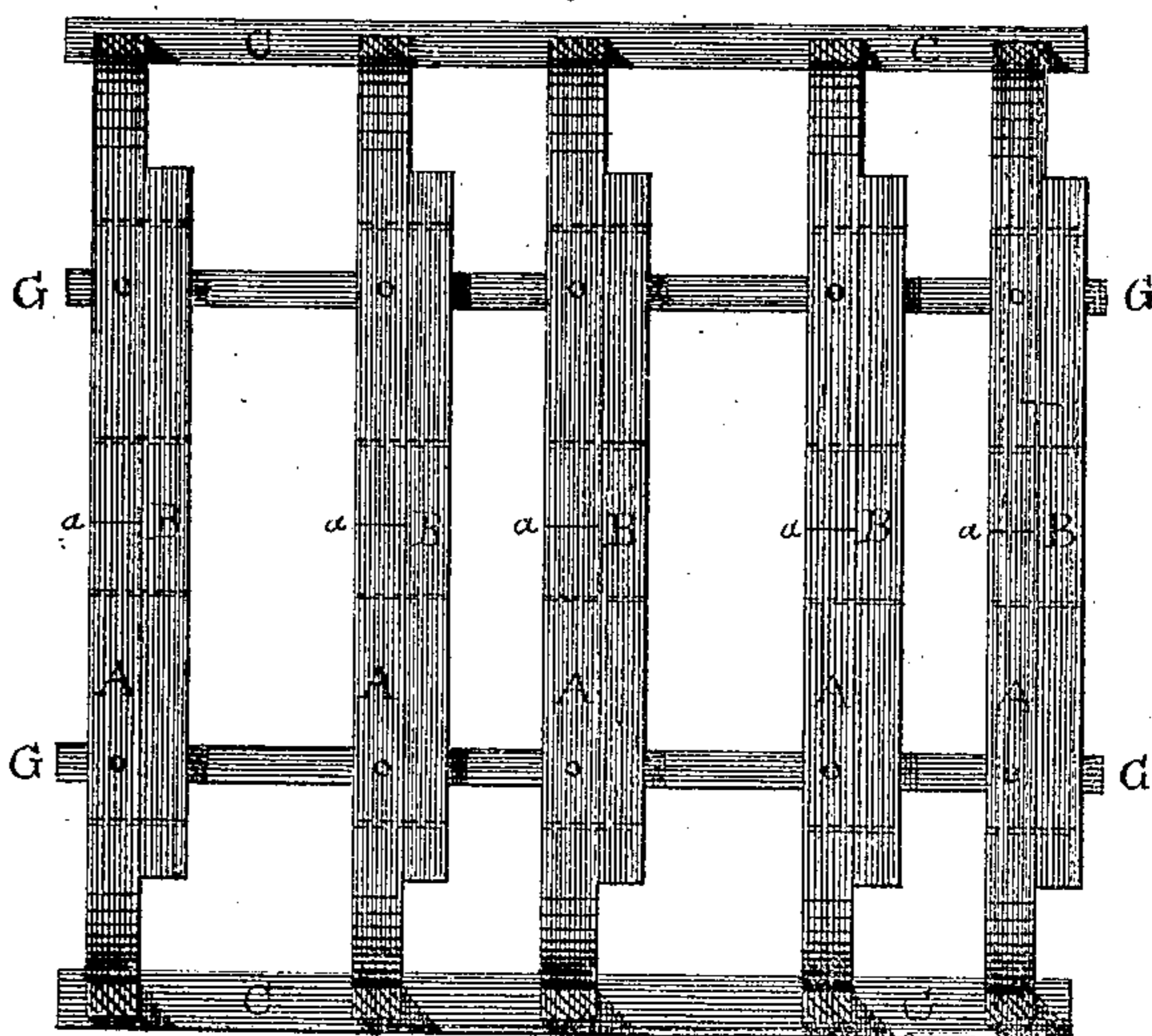


fig. 4.



Witnesses

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JOHN W. GRIFFITHS, OF EAST BOSTON, MASSACHUSETTS.

Letters Patent No. 114,675, dated May 9, 1871.

## IMPROVEMENT IN RAILROAD CARS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN W. GRIFFITHS, of East Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in the Construction of Railroad Cars, of which the following is the specification.

In the drawing—

Figure 1 is an end view or elevation;

Figure 2 is a side elevation;

Figure 3 is a plan view of the top; and

Figure 4 is a plan view of the bottom, looking down from the inside of the body of the car.

The invention consists in the construction of the bodies of railroad cars, in which the ribs are of wood, bent to form the sides, top, and bottom of the body.

A A are the ribs, made of wood, bent to form the body of the car, as represented in fig. 1, having the ends abut together at *a* and form the cross-sills of the bottom of the car-body.

B B are transverse sills, for the double purpose of securely holding the ends of the bent ribs in place, and, with the ribs, sustaining the floor of the car, and are bolted horizontally to the ribs, as seen in figs. 2 and 4.

C C are longitudinal rails, which form the base for the windows. They are made in two pieces, each half having a notch on its edge to receive the rib, and when put on the ribs will meet at their edges. They are then bolted to and through the ribs, as seen in figs. 1 and 2.

D D are longitudinal rails above the windows, and are attached to the ribs in the same way as the rails C; but in being notched onto the ribs the two parts do not come together, but leave a space between them for the window-sash to slide freely up through such opening.

E E are longitudinal rails placed above the rails D to form the base of the ventilating-opening.

F F are straight or upwardly-curved transverse caps, to form the upper margin of the ventilating-ori-fices and make the foundation for the roof of the car. They are bolted in a horizontal direction on the side of ribs A, and thus form a strong base for receiving and supporting the roof of the car.

G G are longitudinal sills of the length of the body of the car, and to which the bent ribs A are bolted.

The ribs A are made from wood, of the length to make the circumference of the center of the wall of the body of the car, well steamed, and bent in the form that the car-body in cross-section is to have, and are secured to the longitudinal sills G and to transverse sills B by bolts.

The ribs A can be made of two pieces, in which case they will have joints at *a* and *a'*; but when made of one piece are preferable, and in that case the joint will be at *a*.

For the sills of the end platforms a piece of wood, of the proper size and length, is bent in the proper form, and secured to longitudinal sills G in any secure way.

The frame of a car-body thus constructed is stronger, less liable to break into splinters in case of a collision, is lighter and more elastic, which gives to it greater ability, and at the same time decreases its cost of construction.

The car-body thus constructed can also be covered on the outside in any way desired, either with wood, metal, or other substances, as the frame being wholly of wood the outside covering or inside finish can be readily applied.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The ribs A, made from one piece of wood, the ends abutting at *a*, bent in the form and secured in the manner described.

2. The frame of a railroad car, when constructed from the wooden bent ribs A, transverse sills B, rails C, D, and E, caps F, and sills G, the several parts formed, arranged, and secured together in the manner described.

JOHN W. GRIFFITHS.

Witnesses:

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