

(No Model.)

G. T. MORRIS.
FREIGHT CAR.

No. 512,734.

Patented Jan. 16, 1894.

FIG. 2.

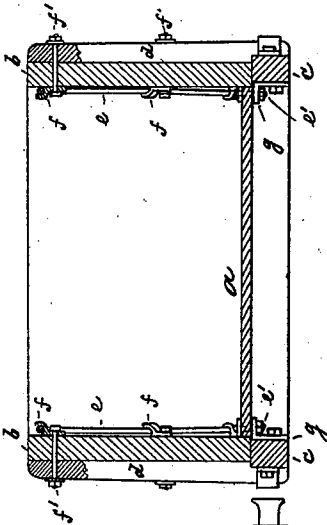


FIG. 4.

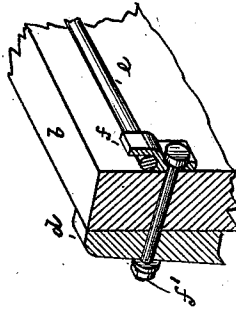
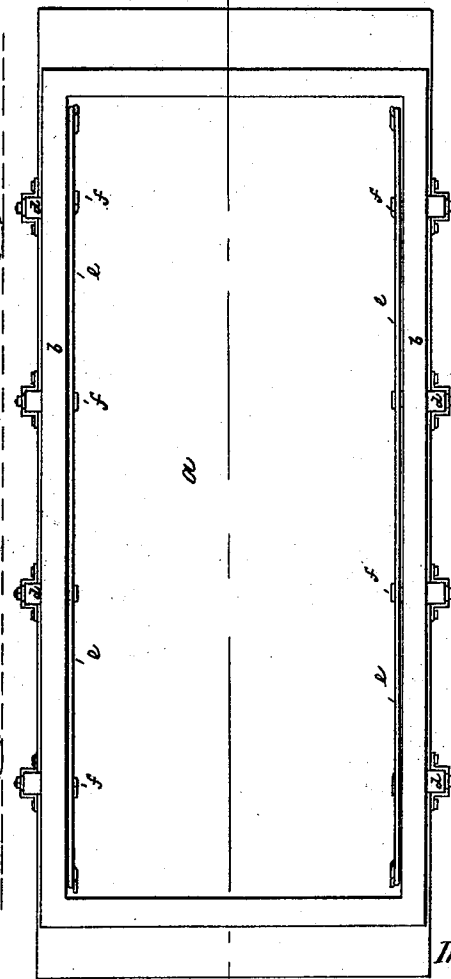
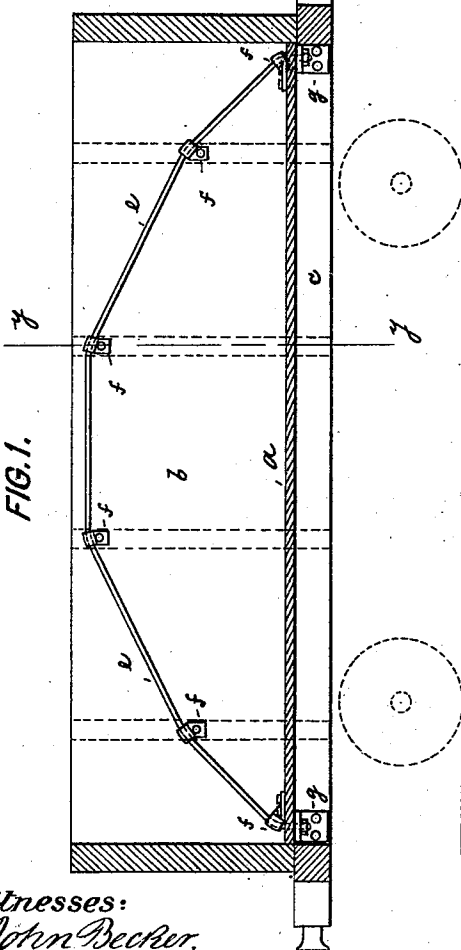


FIG. 1.



Witnesses:

John Becker.
Wm. Schulz.

Inventor:

George T. Morris
by his attorneys
Rodgers & Driesen.

UNITED STATES PATENT OFFICE.

GEORGE T. MORRIS, OF GUTTENBERG, NEW JERSEY.

FREIGHT-CAR.

SPECIFICATION forming part of Letters Patent No. 512,734, dated January 16, 1894.

Application filed October 28, 1893. Serial No. 489,360. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. MORRIS, of Guttenberg, Hudson county, New Jersey, have invented an Improved Freight-Car, of which the following is a specification.

This invention relates to a freight car in which the sides are so braced that they will not become bulged under lateral pressure, while the sills are simultaneously so braced that they will not become bulged under longitudinal strain.

In the accompanying drawings: Figure 1 is a vertical longitudinal section of my improved freight car on line *x, x*, Fig. 3. Fig. 2 is a cross section on line *y, y*, Fig. 1; Fig. 3 a plan of the car and Fig. 4 a detail of part of the brace and of its supporting hook.

The letter *a*, represents the bottom of a coal or other freight car, of which *b, b*, are the sides supported upon the longitudinal sills *c*, as usual. These sides are reinforced at their outer face by the upright posts *d*, placed at suitable distances apart. At its inner face, each side is provided with a bent or curved brace rod *e*, that extends from or near the two corners, upward toward the center of the car, where it reaches its greatest elevation. This brace rod is secured to the side *b*, by means of inwardly projecting hooks or fasteners *f*, that receive the rod and permit upward expansion of the same. Each hook *f*, is fastened to the side *b*, by means of a bolt *f'*, that passes through the side and also through the post *d*. At each of its two

ends, the rod *e*, passes through a perforation of the car bottom *a*, and through a bracket *g*, attached to and projecting inwardly from the car sill *c*. A nut *e'*, engaging the threaded end of the rod, secures the same to the bracket.

The advantages connected with my improved car are numerous. As is well known, outside bracing is objectionable, because when broken, the brace is apt to interfere with the rolling stock on the adjoining track. My improved brace, being always contained within the car body, cannot possibly cause accidents of this kind. When the car is loaded, the sides *b*, will be prevented from bulging outwardly at the center, because the brace rods, that are attached to the sides, are also attached to the sills, and of course, the latter cannot become displaced by lateral pressure of this kind. Moreover the rods brace the sills themselves and prevent them from bulging and breaking under end-collision, which at present necessitates frequent repairs.

What I claim is—

A freight car provided with inner longitudinal braces and with fasteners projecting inwardly from the car sides, and which are adapted to receive and attach said braces to the car sides, substantially as specified.

G. T. MORRIS.

Witnesses:

WM. SCHULZ,
F. V. BRIESEN.