

B. J. LA MOTHE.
Metallic Car.

No. 198,631.

Patented Dec. 25, 1877.

Fig. 1.

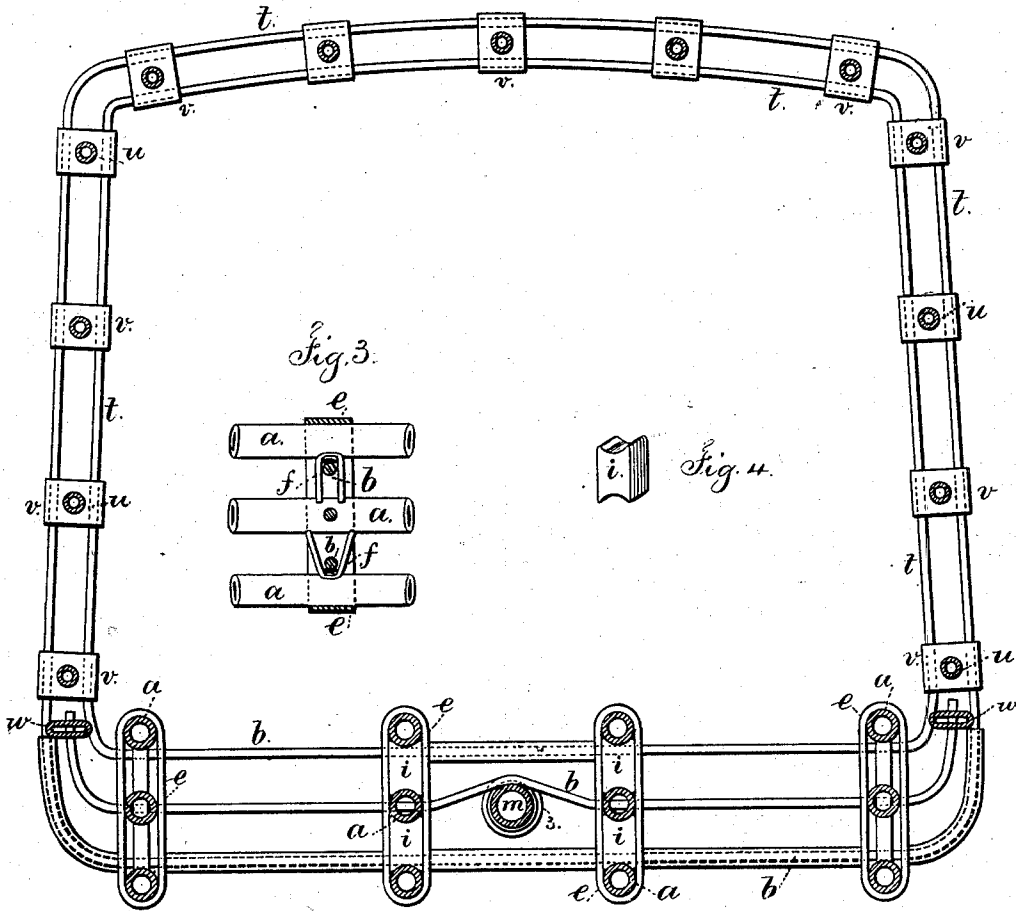


Fig. 3.

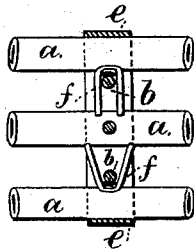


Fig. 4.



Fig. 2.

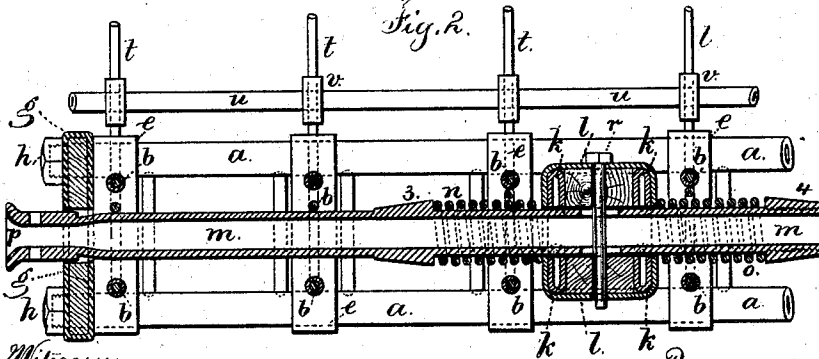


Fig. 5.



Witnesses,

Charles H. Smith
Harold Smith

Inventor
Bernard J. La Mothe.
for Samuel W. Serrell
att'y

UNITED STATES PATENT OFFICE.

BERNARD J. LA MOTHE, OF NEW YORK, N. Y.

IMPROVEMENT IN METALLIC CARS.

Specification forming part of Letters Patent No. **198,631**, dated December 25, 1877; application filed May 7, 1877.

To all whom it may concern:

Be it known that I, BERNARD J. LA MOTHE, of the city and State of New York, have invented an Improvement in Metallic Cars, of which the following is a specification:

I make use of tubes and rods to form the frame-work and platform of the car; and my present invention relates to peculiar features of construction, and to the means for firmly uniting the tubes or rods to each other at the points of intersection. I also make use of a tubular draft-bar passing through the transom-beam, and provided with springs at the opposite sides of the bar, so as to obtain great strength, durability, simplicity, ease of adjustment, and lightness.

In the drawings, Figure 1 is a section transversely of the car, showing the frame thereof. Fig. 2 is a longitudinal section of the draft-bar and part of the platform. Fig. 3 represents the wedge-acting filling-pieces that are used at the intersections. Fig. 4 shows one of the wooden blocks employed at the intersections, and Fig. 5 shows the wrought-iron coupling-clips used in the upper part of the car-frame.

In Letters Patent No. 185,446, granted to me, a metallic car-frame is set forth. My present invention is an improvement upon the same in the particulars hereinafter set forth.

The platform portion of the car is composed of the longitudinal tubes *a a* and transverse tubes or rods *b b*, and at the intersections there are wrought-iron straps *e*, that pass around the ranges of longitudinal tubes *a*, and are perforated for the passage of the transverse tubes or rods *b*.

To facilitate the adjustment of the parts to their proper positions as they are put together, it is preferable to employ holes that are large enough to allow the rods or tubes to slide through the straps with comparative freedom; but after the parts are in place the intersections require to be held firmly. This I accomplish by the blocking-pieces *i*, that are driven into the straps *e* between the respective pipes or rods. These blocking-pieces may be made of wood or metal, in the shape shown in Fig. 4, with the ends recessed semicircularly and slightly wedge-shaped, so as to be inserted where the pipes can be slightly sprung apart, and then driven into place firmly; but I pre-

fer to use blocking-pieces of metal, that are introduced in a V shape into their places, as shown at *f*, Fig. 3, and after the parts have been correctly positioned these blocking-pieces are tightened by the ends being driven toward each other into a parallel or nearly parallel position, thereby acting as toggles or wedges to clamp the pipes or rods firmly within the straps *e*.

The longitudinal tubes of the platform are, by preference, secured at their ends to the end beam *g* by passing them through the beam, and having nuts or screw-caps screwed upon the said pipes at one or both sides of the beam, as at *h*.

The transom-beam is made of metal tubes *k*, preferably flattened, and with wood between said tubes, and bound together by a sheet-metal case, *l*, which is especially useful near the middle, where the king-bolt is applied.

The draft-bar is made of a tube, *m*, that passes through the transom-beam, and it is provided with helical springs *n o* around the same, one at each side of the transom-beam, and there are collars 3 and 4 around said tube *m*, forming abutments for the springs. These collars may be either screwed on or secured by cross-pins, or otherwise.

At the outer end of the draw-bar is a hollow open head, *p*, for the reception of a link or other coupling device, and this head *p* is firmly secured to the tube.

It will now be understood that the tube *m*, sliding through the transom-beam in either direction, and being resisted by the springs, makes both a spring draw-bar and a yielding buffer.

The tube *m* should be slotted longitudinally at the transom-beam to allow for the passage of the bolt *r*, which bolt may be the king-bolt of the truck, if so desired. This tubular draft-bar may be filled with wood, if desired, to stiffen it.

The framing of the upper part of the car is composed of the rods or tubes *t* and longitudinal tubes or rods *u*, as heretofore employed. The intersection coupling-clips *v*, however, are each made of the wrought metal, in the form of a flattened band, with the tubular openings at the opposite sides for the passage of the tubes or bars *t*, as seen in Fig. 5, and

with perforations through the two thicknesses of the flattened band for the passage of the longitudinal tubes or rods *u*. This construction of intersecting band is very strong, and it is easily applied, and renders the frame light and durable.

The sills *w*, formed of flattened tubes, bars, or bands at the lower parts of the sides of the car, receive the upper ends of the intermediate transverse tubes or rods of the platform, and these sill tubes or rods are to be notched or indented where the framing tubes or rods pass at each side of them.

I claim as my invention—

1. The combination, with the longitudinal and transverse tubes or rods, of the straps *e* and blocking-pieces *i*, substantially as set forth.

2. The intersection coupling-clips *v*, each

made of a flattened band, with tubular openings through at opposite sides for the tubes or rods *t*, and with a transverse perforation for the tube or rod *u*, in combination with said longitudinal and transverse rods or tubes of the metallic car-frame, substantially as set forth.

3. The tubular draft-bar *m*, made with the coupling-head at one end, and passing transversely through the transom-beam, in combination with the springs *n o* and collars 3 4 at each side of the beam, substantially as set forth.

Signed by me this 6th day of April, A. D. 1877.

B. J. LA MOTHE.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.