

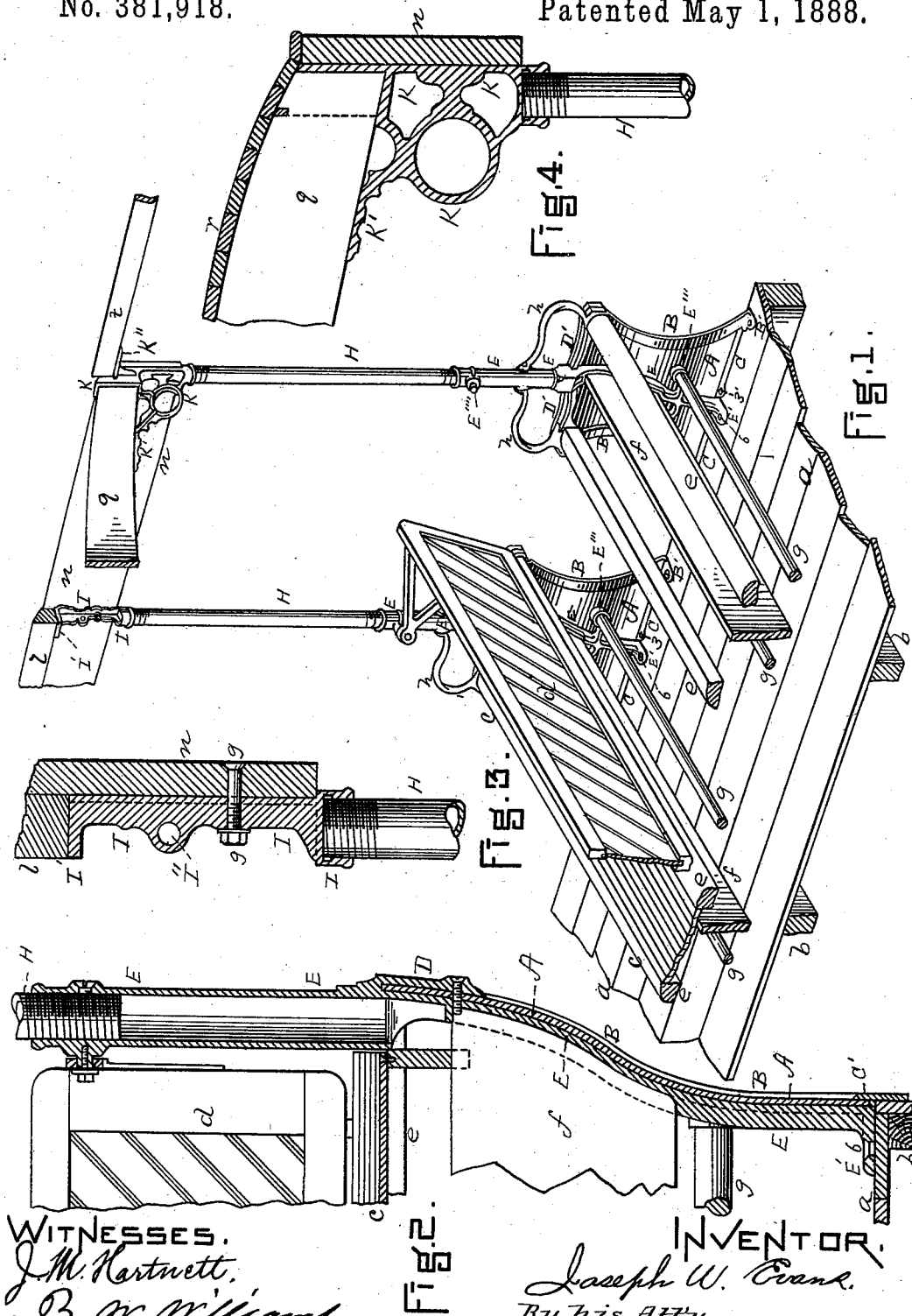
(No Model.)

2 Sheets—Sheet 1.

J. W. EVANS.  
STREET CAR.

No. 381,918.

Patented May 1, 1888.



WITNESSES.  
*J. M. Hartnett.*  
*B. W. Williams.*

INVENTOR.  
*Joseph W. Evans.*  
By his Atty.  
*Henry W. Williams*

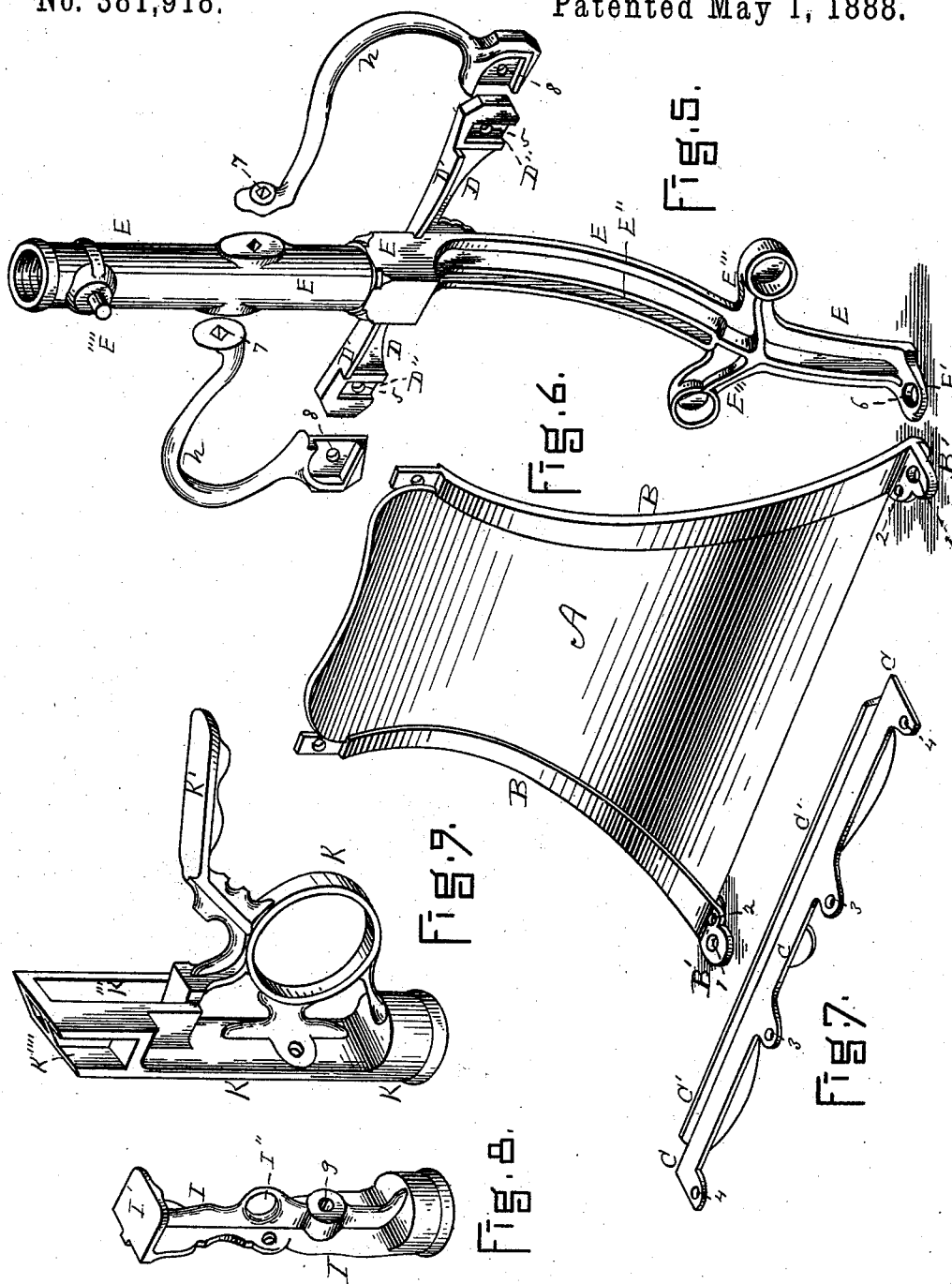
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# UNITED STATES PATENT OFFICE.

JOSEPH W. EVANS, OF NEWBURYPORT, MASSACHUSETTS.

## STREET-CAR.

SPECIFICATION forming part of Letters Patent No. 381,918, dated May 1, 1888.

Application filed November 19, 1887. Serial No. 255,572. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH W. EVANS, of Newburyport, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Street-Railway Cars, of which the following is a specification.

This invention relates to that class of street-railway cars known as "open cars" or "summer cars;" and it consists in the construction and arrangement of certain of the parts, whereby various advantages—such as additional strength and rigidity—are obtained, such construction being fully described below, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a sufficient portion of a street-railway car to embody my invention, such view showing also portions of the adjacent or connecting parts. Fig. 2 is an enlarged vertical section taken transversely with the car and through one of the posts, showing the lower section thereof and a little of the central section. Fig. 3 is a similar vertical section of the upper section or bracket of one of the inner posts, showing also in elevation the upper end of the central section thereof. Fig. 4 is a vertical section, taken transversely with the car, of one of the upper sections or brackets of an end post and adjacent parts, a portion of the central section of said post being shown in elevation. Fig. 5 is a detached perspective view of the lower section of a post and the grab-irons. Fig. 6 is a detached perspective view of one of the wooden panels provided with its metallic side pieces or frame. Fig. 7 is a similar view of the bottom piece or lower rail of a panel. Fig. 8 is a similar view of the upper section or bracket of one of the inner posts. Fig. 9 is a similar view of the upper section or bracket of one of the end posts.

Similar letters of reference indicate like parts.

*a* represents the floor of the car; *b*, the cross-sills; *c*, the seats; *d*, the swiveled seat-backs; *e*, the seat-rails; *f*, the seat partitions or supports, and *g* the foot-rails, all constructed as usual.

*A* is the panel, preferably made of wood. This panel is held in a metallic frame consisting of four pieces—viz., the side pieces, *B*, grooved to receive the edges of the panel and

provided with feet *B'*, secured at 1 to the floor of the car and at 2 to the bottom piece; the bottom piece, *C*, provided with a vertical flange, *C'*, to prevent the panel from moving outwardly, and secured at 3 to the floor and at 4 to the side pieces, and the top piece, *D*, covering the upper edge of the panel by means of the horizontal flange *D'*, secured at 5 to the side pieces and recessed at *D''* to receive their upper ends. In the drawings this piece is represented as integral with the lower section of the post. If made separate, it should be securely bolted thereto. Panels as ordinarily constructed are of wood, provided with a rim of the same piece. They have been made, however, entirely of iron. I retain the wood for the panel proper, but leave off the rim and frame it in metal, as above described, thereby adding to its beauty, strength, and rigidity, and enabling me to put in a very light panel. By making this frame in four pieces—viz., sides, bottom, and top—if one piece becomes broken, a new one can be inserted without going to the expense of providing an entire new frame, or, in case the frame and panel are integral, of providing an entire frame and panel. The grooves in the side pieces, the vertical flange in the bottom piece, and the horizontal flange in the top piece, hold the panel firmly in position.

*E* is the lower section of a post, (see Fig. 5,) either an inner one or an end one, made of metal and in a single piece. Its foot *E'* is secured at 6 to the floor or sill. It is grooved at *E''* to receive the ends of the seat-partitions *f*, is provided with the socket-arms *E'''* to receive the ends of the foot-rails *g*, and with the pivot *E''''* for the seat-back. (The top piece, *D*, of the panel-frame above described is usually made integral with this section *E*.) It conforms in shape to the shape of the panel and rests against its inner surface. (See Fig. 2.) Its upper end is tubular and internally threaded to receive the central section of the post. The grab-irons *h*, constructed as usual, are secured at 7 to this section and at 8 to the panel-frame.

*H* is the central section of a post, either an inner or an end one, metallic, tubular, and screwing into the lower and upper sections, *I*, (see Figs. 1, 3,) and *8* is the upper section or bracket of an inner post, also of metal and screwing onto the central section, *H*. This

section has a flange, I', for supporting the plate l, a perforation, I'', for the bell-cord to pass through, and to these upper sections or brackets are secured at 9 the name-board n.

- 5 K (see Figs. 1, 4, and 9) is an upper section or bracket of an end post, also of metal and screwing onto the central section, H. This section has an arm, K', for assisting in supporting the head-piece g, (above which is the  
10 roof r,) an arm, K'', for supporting the canopy or bonnet t, Fig. 1, a socket, K''', for receiving an end of the head-piece g, and the socket K'''' for receiving an end of the plate l.

In summer street-cars as at present constructed the posts are of wood. Mine, as will  
15 be seen from the above, are of metal, and each is in three parts, adapted to connect with and support or be supported by the adjacent parts. If desired, however, wooden posts may be inserted in and be supported by the lower sections, E.  
20

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

- 25 1. The combination of the metallic side pieces, B B, internally grooved, as shown, and provided with the feet B' B', the metallic bottom piece, C, provided with the vertical flange C', the metallic top piece, D, provided with  
30 the horizontal flange D', and the non-metallic

panel A, said side pieces, bottom piece, and top piece being each separate and distinct and bolted together, so as to constitute the frame, substantially as and for the purpose described.

2. The combination of the panel A, side  
35 pieces, B B, bottom piece, C C', top piece, D D', and metallic post E, of the shape shown and provided with the groove E'', foot E', socket-arms E''', and pivot E''''', all made integral and conforming in shape to the shape of the  
40 panel, substantially as and for the purpose set forth.

3. The combination of the lower section, E, of substantially the shape described, the central section, H, and the upper section, I, provided with the flange I', said sections being all  
45 of metal and rigidly secured together, substantially as and for the purpose set forth.

4. The combination of the lower section, E, of substantially the shape described, the central section, H, and the upper end section, K,  
50 provided with the arms K' and K'' and the sockets K''' and K''''', said sections being all of metal and rigidly secured together, substantially as and for the purpose described.

JOSEPH W. EVANS.

Witnesses:

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