H. A. HUNT.

MEANS FOR BOARDING TRAMCARS.

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1,315,840.

Patented Sept. 9, 1919.

Fig. 1.

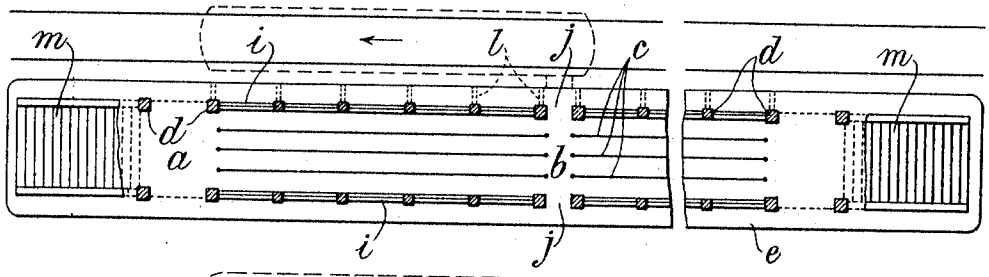


Fig. 2.

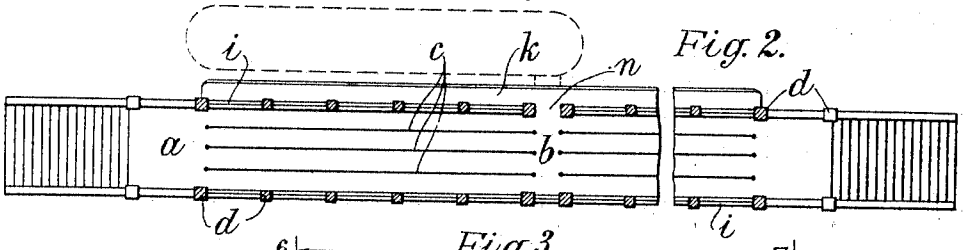


Fig. 3.

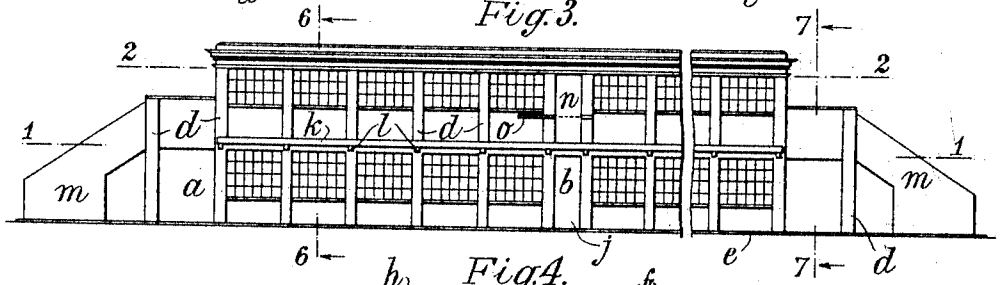


Fig. 4.

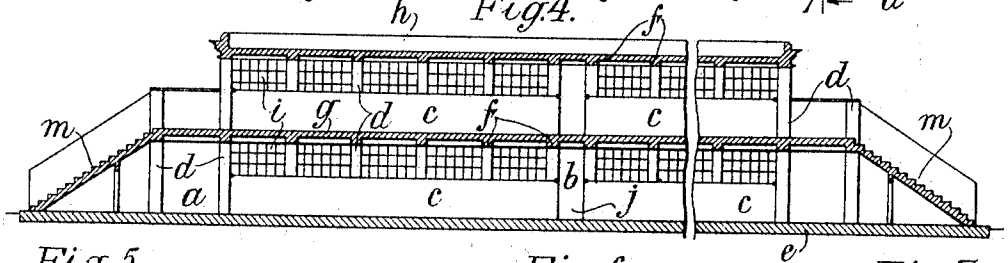


Fig. 5.

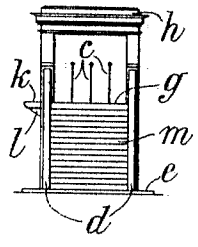


Fig. 6.

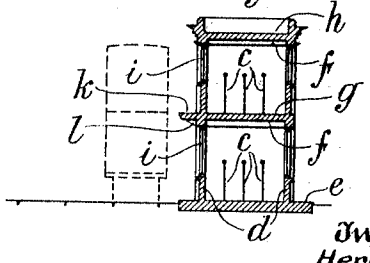
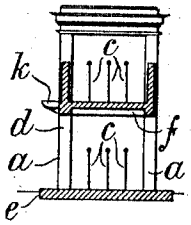


Fig. 7.



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MEANS FOR BOARDING TRAM-CARS.

1,315,840. Specification of Letters Patent. Patented Sept. 9, 1919.

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To all whom it may concern:

Be it known that I, HERBERT ARTHUR HUNT, a subject of His Majesty the King of England, and resident of Wandsworth, in the county of London, Kingdom of England, have invented certain new and useful Improved Means for Boarding Tram-Cars, of which the following is a specification.

This invention relates to a double deck structure to be used in conjunction with the loading of tramcars.

The invention refers to improvements in structures erected for the purpose of containing and sheltering passengers drawn up in queues to prevent accidents and to obtain more orderly entrance of passengers wishing to board tramcars. Great numbers of persons are at present (during rush hours) drawn up in single story queue shelters, an example of which is existant at Blackfriars Bridge, London. The primary object of the invention is to provide shelters with two stories of queue space, arranged one above the other, so that when a tramcar draws up beside the shelter passengers may pass into the lower saloon of the tramcar from the ground level queue, and simultaneously other passengers may pass into the upper saloon of the tramcar from a platform which is formed at the same level as said upper saloon of the tramcar, and to which platform access is obtained from the upper story of the queue shelter. Another object is to expedite the service of the tramcar system, thus reducing the time spent by passengers in traveling from one point to another; for if persons can pass direct to the upper and lower saloons of tramcars at the same time the length of halt of the tramcar at any one point is materially reduced. In order to obtain these ends this invention contains certain features of novelty by which the said objects are attained, and in order that it may be more fully understood the invention will now be described with reference to the accompanying drawings, in which:—

Figure 1 is a sectional plan of the improved structure about the line 1—1 Fig. 3, that is, a plan of the ground level thereof;

Fig. 2 is a sectional plan about the line 2—2 of Fig. 3, that is, a plan of the upper level of the structure, which level coincides with the level of the floor of the top saloon of the tramcar;

Fig. 3 is an elevation of the side of the structure next to the near side of the tramcar;

Fig. 4 is a longitudinal sectional elevation through the structure;

Fig. 5 is an end elevation and shows the steps provided for approach to the upper level;

Fig. 6 is a sectional elevation on the line 6—6 of Fig. 3 and through the structure where the waiting passengers will stand in queues; and

Fig. 7 is a sectional elevation on the line 7—7 of Fig. 3 and through the landing at the top of the stairs, from which landing the passengers enter the space divided into queues.

Only one complete bay of the structure is shown in the drawings. This bay extends from the entrance *a* to the first cross gangway *b* giving access to the cars, but the whole structure may be extended by as many bays as desired to provide for the loading of an indefinite number of cars. Thus, if it was desired to load five tramcars standing one behind the other at the same time a structure extending to five lengths or bays of queue space would be erected. Also, in the drawings the structure is shown divided by metal or other screens or hand rails *c* into four divsions or queues on each level, but said structure could be narrowed or widened to take any number of queues desired for the needs of the traffic and tramway services.

In the erection of the structure the regulations of the local municipal or other governing body, particularly those relative to staircases, can be rigidly followed, and the structure can be erected of reinforced concrete, this material being fire and weather resisting, or of brick or stone with timber or steel beams or floors, or of timber only.

The structure shown consists of a series of piers *d* resting on firm foundations *e* and connected together by horizontal beams *f* at the levels of the upper floor *g* and the roof *h*. On these beams the floor and roof slabs are fixed and the roof is rendered water tight by a layer of asphalt laid to fall to one or more rain water gutters.

The sides of the structure are closed with

thin walls and glazed sashes *i* as a protection against inclement weather, and on the lower level openings are formed on the side abutting upon the tramlines so that exit may be made from the cross gangways *b*.

On the upper level *g* a narrow platform *k* is formed projecting from the side of the structure on which the tramcars pass, this platform being carried by cantalivers *l* projecting from and supported by the piers carrying the floor and roof slabs. This platform is of sufficient strength to carry a full moving load of passengers. To obtain access to the upper story *g*, staircases *m* are provided at both ends of the structure in order that the queue spaces may be rapidly filled and to allow for a greater number of services to be served by each structure.

The use of the structure is as follows:— Passengers desirous of traveling in the lower saloon of a tramcar take their places in the queue spaces of the lower story of the structure, while passengers desirous of traveling in the top saloon of the tramcar ascend the stairs *m* and take their places in the queue spaces on the upper story. The queue spaces are not continuous but are intersected at lengths of 33 feet by the cross gangways *b* which, on the upper story lead and give access to the platform *k* at *n*. To prevent an unruly rush of passengers from the cross gangway opening *n* on to the platform *k* said opening or gangway can be cut off from the platform by a steel rod sliding in a metal sleeve *o* and controlled by an attendant. When the tramcar draws up alongside the platform *k* the attendant, having satisfied himself that the door of the top saloon of the tramcar is open, pushes back the rod and allows the passengers to cross the platform and enter the car, and when the complement of passengers has passed he slides back the bar from the sleeve across the opening *n*.

In conclusion, my invention is applicable to all tramway services using double decked cars if doors are provided to give access to the upper decks or saloons.

What I claim is:—

1. A tramcar loading structure including a lower passenger platform accessible from the ground level and an upper passenger platform accessible from the ground level without passing into said lower platform, each of said platforms having a defined exit toward the tramcar, each of said platforms having longitudinal passenger divisions leading to such defined exit.

2. A structure or shelter for use by passengers for boarding the upper and lower saloons or decks of a tramcar simultaneously without using the steps of the car, said structure comprising a lower story at the level of the ground, entrance to and exits from said story, an upper story, steps leading up to said upper story, queue spaces in the two stories, a platform at the level of the upper saloon or deck of a tramcar, and cross gangways leading from the queue spaces to said platform, to the lower platform of the car, and to the street.

3. A structure or shelter for use by passengers for boarding the upper and lower saloons or decks of a tramcar simultaneously without using the steps of the car, said structure comprising a lower story at the level of the ground, entrances to and exits from said story, an upper story, steps leading up to said upper story, queue spaces in the two stories, a platform at the level of the upper saloon or deck of a tramcar, cross gangways leading from the queue spaces to said platform, to the lower platform of the car, and to the street and screens dividing the queue spaces.

In testimony whereof I have hereunto signed my name.

HERBERT ARTHUR HUNT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."