May 17, 1932. F. E. McCAIN 1,858,407

LOADING STATION AND PLATFORM

Filed April 18, 1930 4 Sheets-Sheet 1

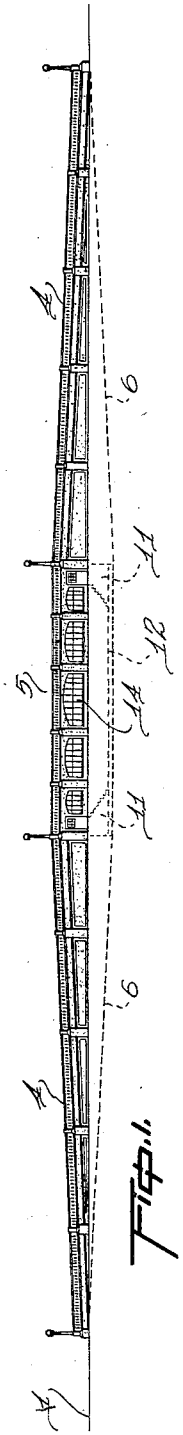


Fig. 1.

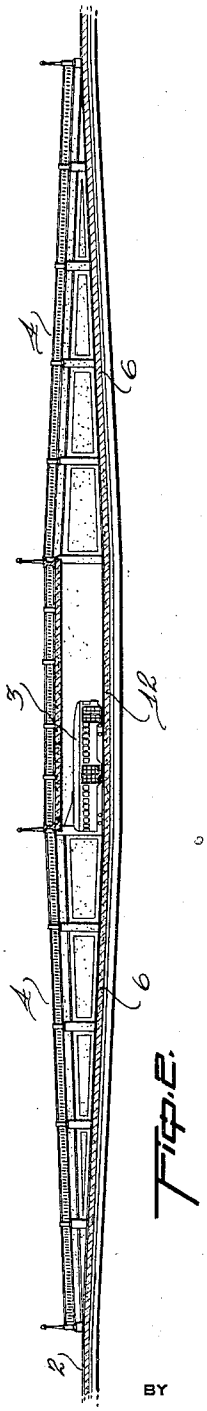


Fig. 2.

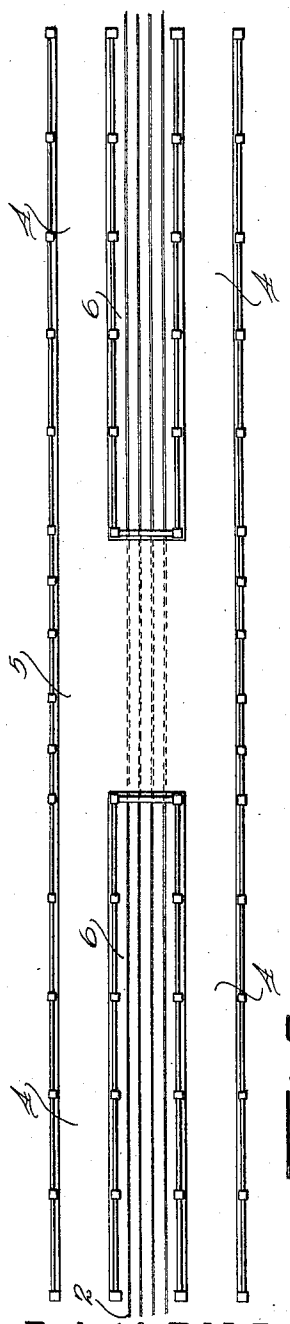


Fig. 3.

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LOADING STATION AND PLATFORM

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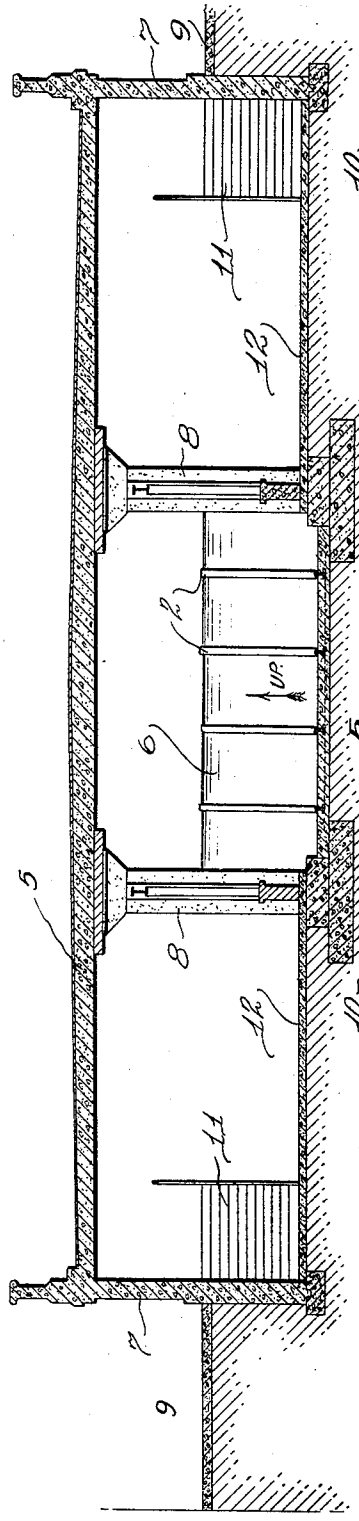


Fig. 5.

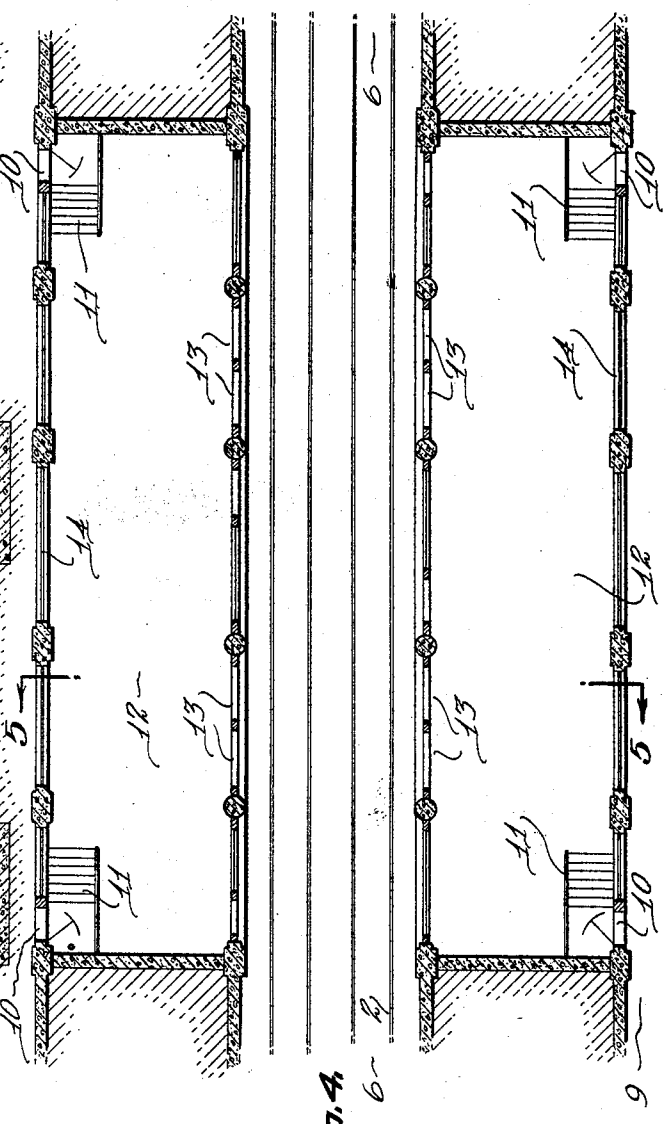


Fig. 4.

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May 17, 1932. F. E. McCAIN 1,858,407

LOADING STATION AND PLATFORM

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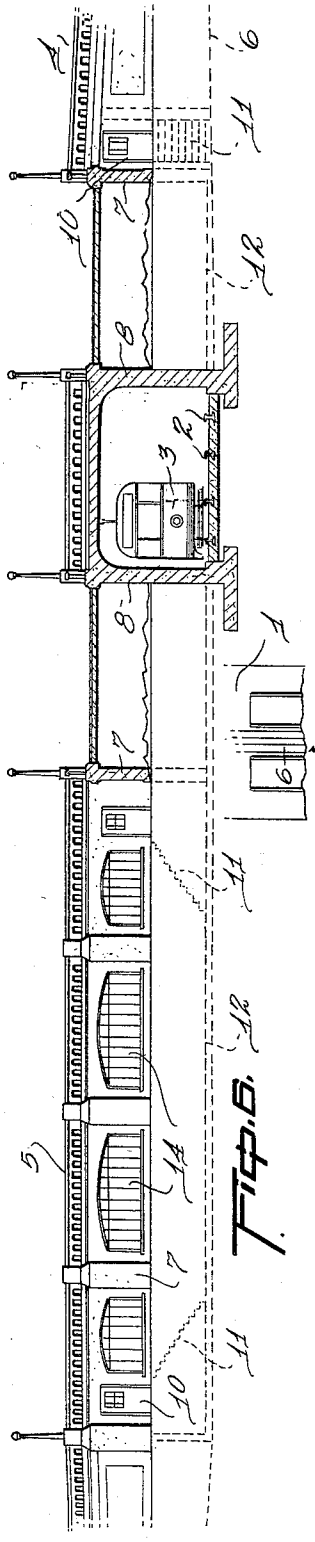


Fig. 6.

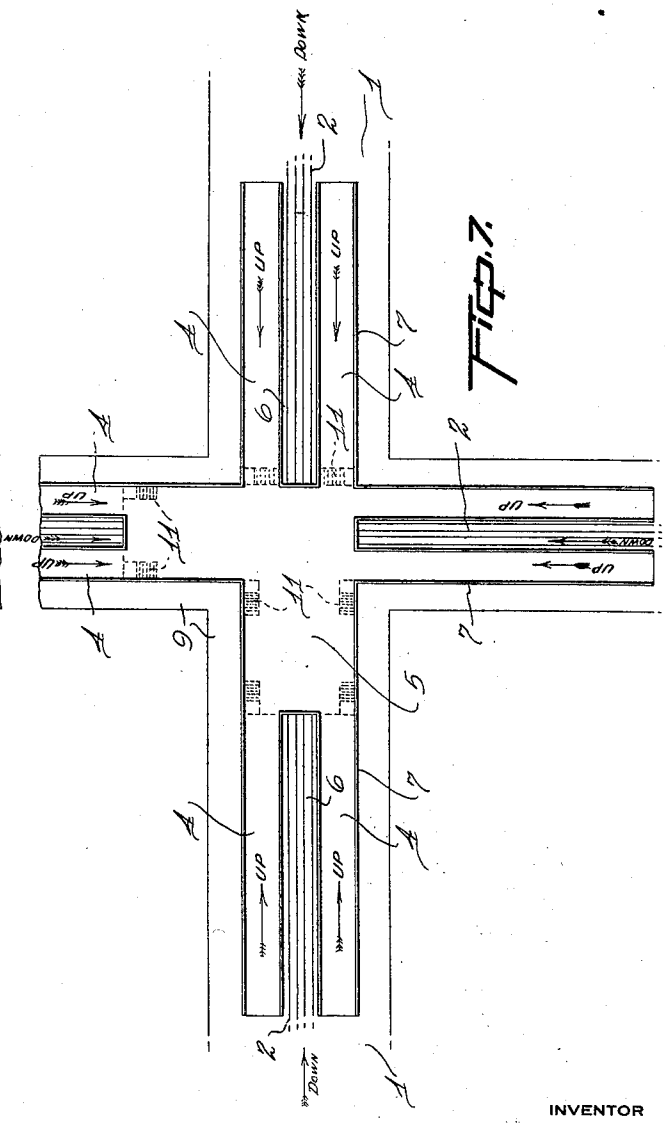


Fig. 7.

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LOADING STATION AND PLATFORM

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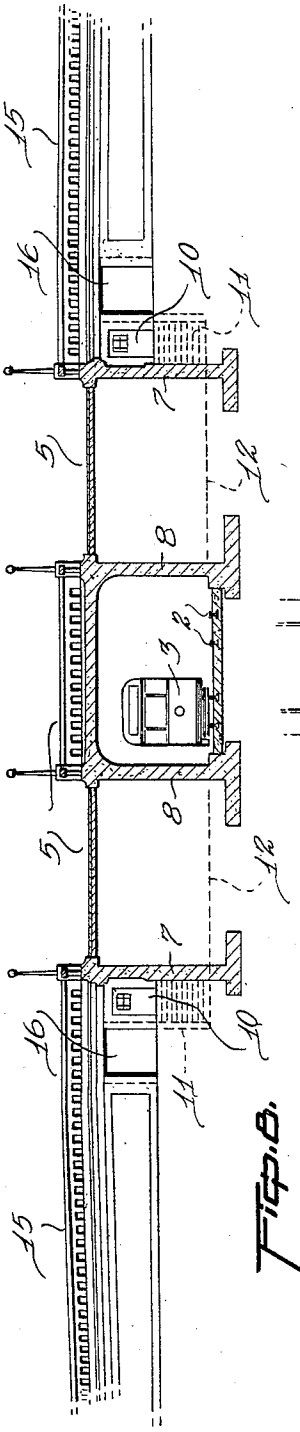


Fig. 8.

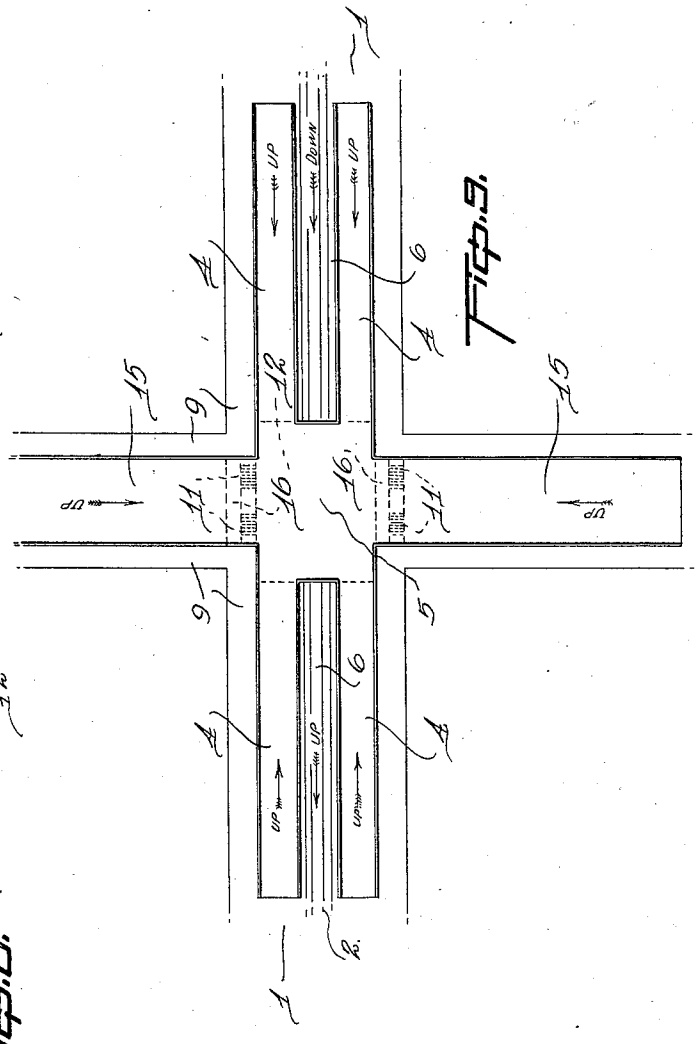


Fig. 9.

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Patented May 17, 1932 1,858,407

UNITED STATES PATENT OFFICE

FREDERICK E. McCAIN, OF DETROIT, MICHIGAN

LOADING STATION AND PLATFORM

Application filed April 18, 1930. Serial No. 445,279.

The present invention pertains to a novel loading station or platform and the primary object of the same is to devise adequate means for segregating the automobile traffic from the street railway traffic in the congested districts of a city and permit practically uninterrupted flow of automobile traffic by avoiding the necessity of the street railway passengers crossing the motor vehicle lanes.

Another object of the present invention is to devise a loading station which provides an enclosed platform to accommodate passengers boarding or leaving the street railway cars, said station being capable of being adjusted or adapted to fit the limitations existing relative to the width of the street or highway, the distance to be served, and permit the use of the standard railway equipment now in use. The present device is further capable of being adapted to suit limitations existing relative to intersecting streets having two or more street railway lines crossing each other and in so doing positively eliminates any necessity of a conventional tube or underground system of rapid transit.

Another object of the present invention is to devise a loading station adapted to utilize space provided by excavating beneath the lanes provided for automobile traffic which are elevated slightly to avoid the necessity of too much excavating and in this manner there is provided a covered and enclosed loading platform which may be adequately lighted, heated and ventilated to insure comfort and safety for passengers boarding or leaving street railway cars and permitting them to reach the sidewalk without the necessity of crossing the traffic lanes provided to accommodate automobile traffic.

With the above and other ends in view the invention consists in the matters hereinafter set forth and more particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which

Figure 1 is a side elevation of the present loading station;

Fig. 2 is a longitudinal cross sectional view illustrating a street railway car opposite the loading platform;

Fig. 3 is a top plan view;

Fig. 4 is a cross sectional plan view illustrating a fragment of the present construction and showing the loading platform in detail;

Fig. 5 is a transverse cross sectional view taken on the line 5—5 of Fig. 4;

Fig. 6 is a fragmentary side elevation which is partly in cross section and illustrates the manner in which the present invention is adapted to suit intersecting streets having intersecting railway lines;

Fig. 7 is a top plan view corresponding to the form illustrated in Fig. 6;

Fig. 8 is a side elevation which is partly in cross section to illustrate the manner in which the present invention is adapted to accommodate a street having a street railway line which is intersected by another street without a railway line, and

Fig. 9 is a top plan view corresponding to Fig. 8.

Like characters of reference are employed throughout to designate the corresponding parts.

The numeral 1 indicates a highway having the rails 2 to accommodate street railway cars 3 and it will be assumed that the present device is located in a district having relatively heavy automobile traffic. To segregate the automobile traffic from the street car traffic the present invention provides the upwardly inclined ramps 4 which are joined by the elevated level portion 5 and over which the automobiles may conveniently pass. To accommodate the street car traffic the present invention provides the downwardly inclined ramps 6 which permit the street cars to pass under the level portion 5 and it is the object of the present invention to provide means for accommodating the loading and unloading of the street cars while they are located underneath the level portion 5 so that the automobile traffic may continue its movement without endangering the street car passengers.

The ramps 4 and the level portion 5 are supported by walls 7 and 8 and in the walls 7 which are the outside walls adjacent the sidewalk 9 of the street there are provided doors 10 through which street car passengers may

enter to descend the stairs 11 to gain access to the loading platform 12. The loading platform 12 is covered by the level portion 5 and is therefore completely enclosed, doors 13 being provided in the wall 8 to permit passengers to leave the platform by entering a street car and suitable windows 14 are provided in the walls 7 to permit adequate lighting and ventilating.

It becomes obvious from the foregoing that the passengers may pass from the sidewalk 9 to board the street car or vice versa without danger of being struck by passing automobiles and to accommodate intersecting streets having intersecting street car lines the level portion 5 is elongated on one side of the intersected street so that the loading platform 12 may be located on one side of the intersected street as clearly illustrated in Figs. 6 and 7 of the drawings.

In Figs. 8 and 9 there is illustrated a street having a street car line which is intersected by another street not having a street car line and in this form the construction is practically identical with the above described, the level portion 5, being connected by upwardly inclined ramps 15 to the intersecting street. The loading platform in this form is located directly underneath the intersection and to accommodate pedestrians passing along the sidewalk 9 there is provided a passage 16 which permits them to cross under the street without coming in contact with the automobile traffic.

From the above description it becomes apparent that the present invention is adaptable to streets having intersections or without in a manner avoiding too great a height for the automobiles to climb over and too great a depression for the street cars to pass through. In other words the automobiles and street cars both have equal grades to surmount and by evenly distributing the same a greater efficiency and more rapid transit can be obtained.

Although specific embodiments of the present invention have been illustrated and described it is to be understood that various changes may be made within the scope of the appended claims without departing from the spirit of the invention and such changes are contemplated.

What I claim is:—

1. A structure of the character described comprising floor levels located beneath the normal highway level, side walls projecting upwardly from said floor levels to a point above the normal highway level, upwardly inclined ramps supported by said side walls for permitting passage of automobiles over and above said floor levels, downwardly inclined ramps between said floor levels and having tracks accommodating the passage of street cars, and doors and stairs for permitting the entrance of passengers from said normal street level to said lower levels.

2. A structure of the character described comprising floor levels located beneath the normal highway level, side walls projecting upwardly from said floor levels, a platform supported by said side walls at a point above said normal highway level, upwardly inclined ramps arranged in sets at right angles to each other to permit passage of automobiles over said platform, and downwardly inclined ramps formed in the center of said upwardly inclined ramps and equipped with tracks permitting the passage of street cars thereon, said last named ramps passing between said floor levels and intersecting beneath said platform.

3. A structure of the character described comprising floor levels located beneath the normal highway level, side walls projecting upwardly from said floor levels, a platform supported by said side walls at a point above said normal highway level, upwardly inclined ramps arranged in sets at right angles to each other to permit passage of automobiles over said platform, downwardly inclined ramps formed in the center of said upwardly inclined ramps and equipped with tracks permitting the passage of street cars thereon, said last named ramps passing between said floor levels and intersecting beneath said platform, and doors and stairs permitting passage of pedestrians from the normal street level to said floor levels.

In testimony whereof I affix my signature.

FREDERICK E. McCAIN.