Oct. 23, 1928. 1,689,161

C. A. SKULTIN

HIGHWAY CROSSING

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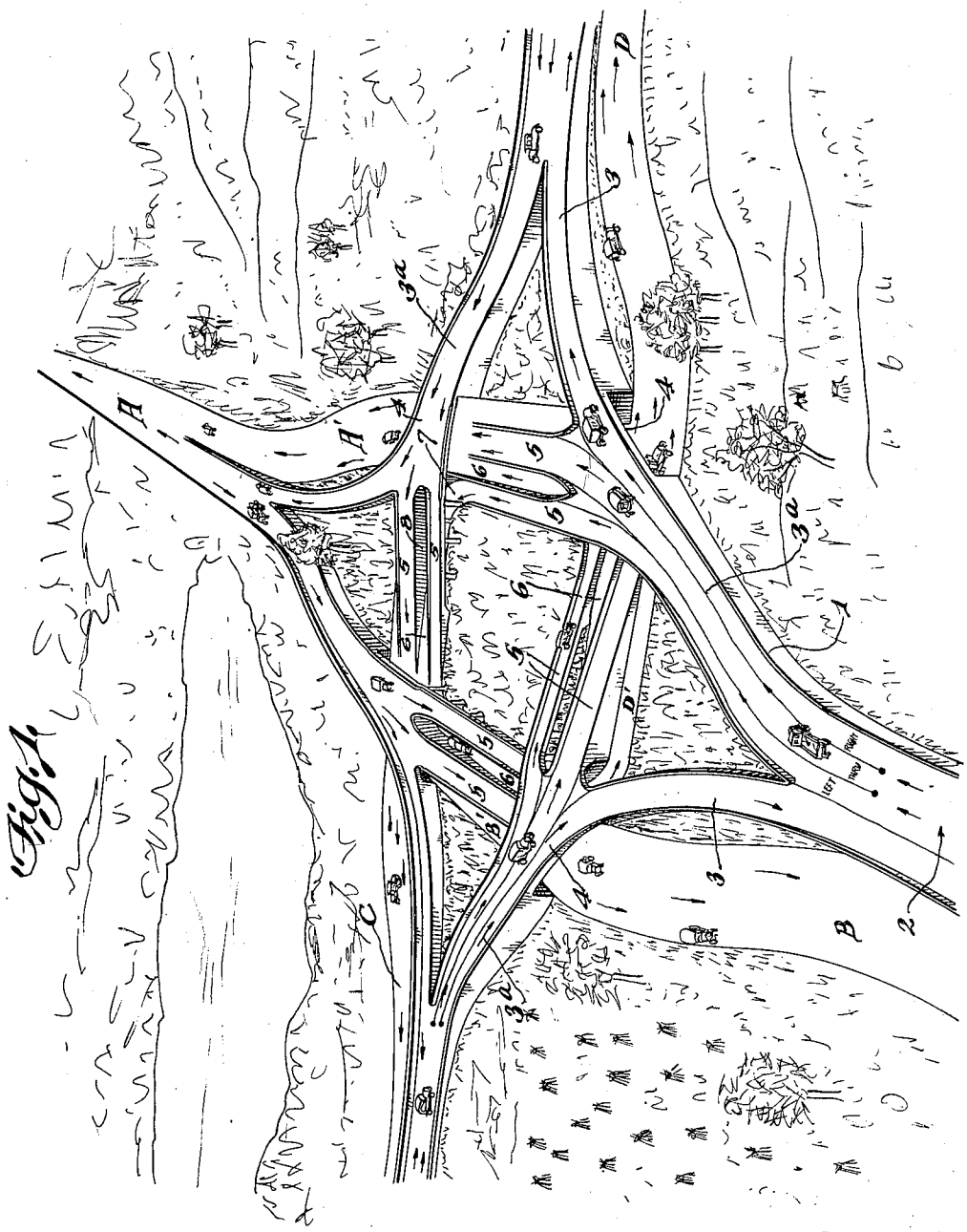


Fig. 1.

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Fig. 2.

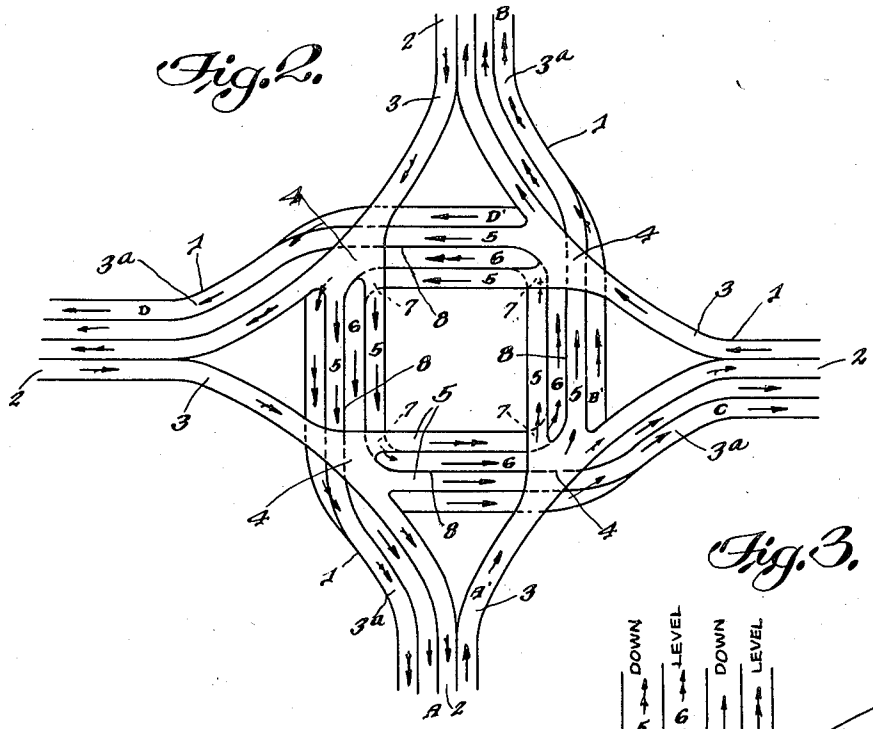


Fig. 3.

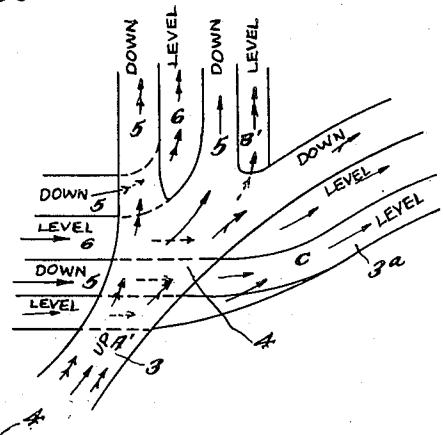
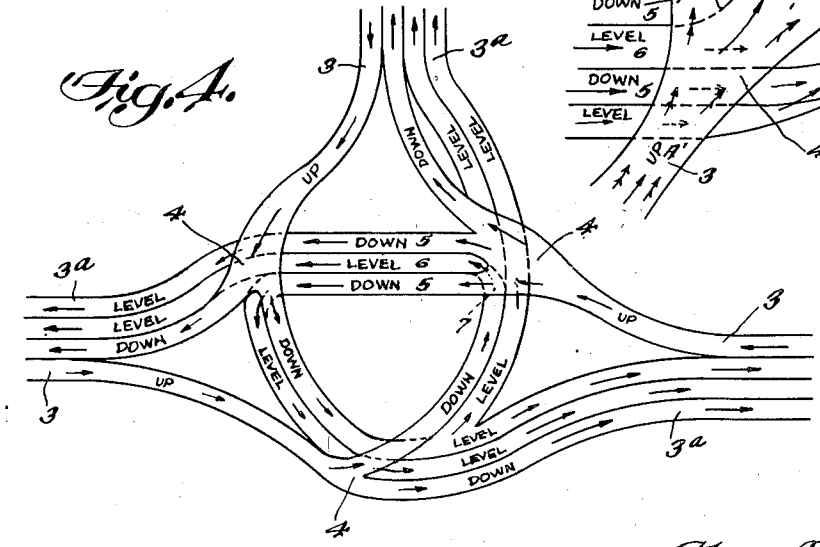


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES A. SKULTIN, OF TOLEDO, OHIO.

HIGHWAY CROSSING.

Application filed November 6, 1925. Serial No. 67,405.

This invention relates to a crossing structure, and more particularly to what I term a highway crossing.

One of the main objects of the invention is to provide a crossing structure adapted for use at the intersection of roads or streets and so constructed as to permit travel of traffic in various directions without interference. A further object is to provide a crossing of this type of comparatively simple construction and which may be readily installed. Further objects will appear from the detailed description.

In the drawings:

Figure 1 is a perspective view of my crossing as applied.

Figure 2 is a diagrammatic plan view of the structure.

Figure 3 is a diagrammatic plan view of one of the corner portions of the structure.

Figure 4 is a diagrammatic plan view of a modified form.

The crossing includes a plurality of corner structures 1 each of which is provided with an inclined approach 2 leading from the road level and with diverging arms 3 and 3^a. The arms 3 of the respective corner structures are connected by viaducts 4 to arms 3^a of adjacent structures. Each corner structure is further provided with two inclined passages 5 extending downwardly and inwardly from the arm 3^a, the lower ends of these passages being at road level and positioned beneath the viaducts 4 connecting arm 3^a of the adjacent corner structure to the arm 3 of the succeeding structure. Passages 5 are spaced apart, the space between these passages forming a supplemental passage 6. The space between the upper end of the inner passage 5 is unobstructed to provide an opening or way 7 which permits vehicles travelling down the inner passage 5 to enter the supplemental passage 6, these vehicles passing upon one of the roadways beneath the structure. The space between the inner side of the outer passage 5 and the ground is closed by a wall 8 so as to prevent the vehicle from passing from the supplemental passage 6 beneath the outer passage 5.

The arm 3^a of each corner structure is provided with suitable signs or markings such as "Left", "Thru", and "Right".

The crossing is erected at an intrsection of roads or streets, the reads A and B leading to and from the crossing at opposite sides thereof and the roads C and D leading from and to the other sides of the crossing. A vehicle approaching the crossing from the roadway B and desiring to make a right turn will travel up the approach 2 following the path indicated by "Right". This vehicle will cross the viaduct 4 and will travel down arm 3 of the succeeding corner structure onto the approach 2 thereof from which it will pass onto the road-way D. If this vehicle desires to continue straight ahead so as to pass onto roadway A it will follow the "Thru" path over arm 3^a and viaduct 4 and will travel down the outer passage 5 from which it will pass onto the extension A′ of roadway A, beneath viaduct 4 extending from arm 3^a of the succeeding corner structure, and thence along extension A′ onto roadway A. If it is desired to make a left turn the vehicle will follow the "Left" path travelling down the inner passage 5 and pass through the opening or way 7 into the supplemental passage 6 between the passages 5 extending from the adjacent corner structure, from which supplemental passage it will pass beneath the viaduct 4 of the next succeeding corner structure and thence onto the roadway C, thus completing the left hand turn. If it is desired to turn around so as to travel in the opposite direction upon B, the vehicle will travel in the direction to make a left hand turn but instead of passing onto the roadway C, it will pass beneath viaduct 4 adjacent roadway C, making a left hand turn and travelling along portion B′ of roadway B so as to return to this road but travelling in the opposite direction thereon from its original direction of travel. The roads D and C are provided with extensions D′ and C′ corresponding to the extensions A′ and B′ of roads A and B, so that vehicles entering upon the corner structure at any corner thereof can readily make the various turns described. It will be noted that by constructing and arranging the various elements of the crossing in the manner illustrated and described, a vehicle traveling in any direction can enter upon and travel over and through the crossing structure making a turn in any direction desired without cutting across or in any way interfering with the traffic upon the roads and the extensions thereof or upon the crossing structure itself. The vehicle when leaving any of the passages or approaches of the crossing will be travelling with the traffic, thus avoiding traffic congestion and eliminating one of the chief causes of accidents. By

using this crossing accidents are eliminated and delay in traffic is avoided, rendering it possible for vehicles to safely travel at higher speed than is now possible without a structure of this character.

In Figures 2 and 3 I have indicated by different types of arrows the various paths of travel of vehicles through and over the structure, which will be clear by reference to Figure 1. In Figure 4 I have shown a slightly modified form of the device in which but two corner structures are employed, these structures being provided with the diverging arms and inclined approaches, one of the structures only being provided with the passages 5 spaced apart to provide the supplemental passage 6. This form of the crossing is intended for use where one road meets but does not cross another road or street. The use of this modified form of crossing is the same as of the form illustrated and described in connection with Figures 1 to 3 inclusive and need not be described in detail.

What I claim is:

1. In a crossing, a plurality of corner structures, the corner structures being provided with inclined approaches having arms diverging inwardly of the crossing, viaducts connecting the adjacent arms of adjacent structures, two passages extending from each viaduct downwardly and inwardly of the crossing toward the next succeeding viaduct and having their lower ends at road level, said passages being spaced apart and the space between the inner side of the outer passage and the ground being closed to vehicles, the space between the upper portion of the inner passage and the ground being open to vehicles, the space between the two passages forming a supplemental passage.

2. In a crossing, a plurality of corner structures, the corner structures being provided with inclined approaches having arms diverging inwardly of the crossing, viaducts connecting the adjacent arms of adjacent structures, a passage extending from each viaduct downwardly and inwardly of the crossing toward the next succeeding viaduct and having its lower end at road level, the space between the upper portion of said passage and the ground being open to permit vehicles to pass beneath said upper portion of the passage.

In testimony whereof I affix my signature.

CHARLES A. SKULTIN.