

902,073.

C. H. GUERITEY.

AMUSEMENT APPARATUS.

APPLICATION FILED AUG. 12, 1908.

Patented Oct. 27, 1908.

2 SHEETS—SHEET 1.

Fig. 1

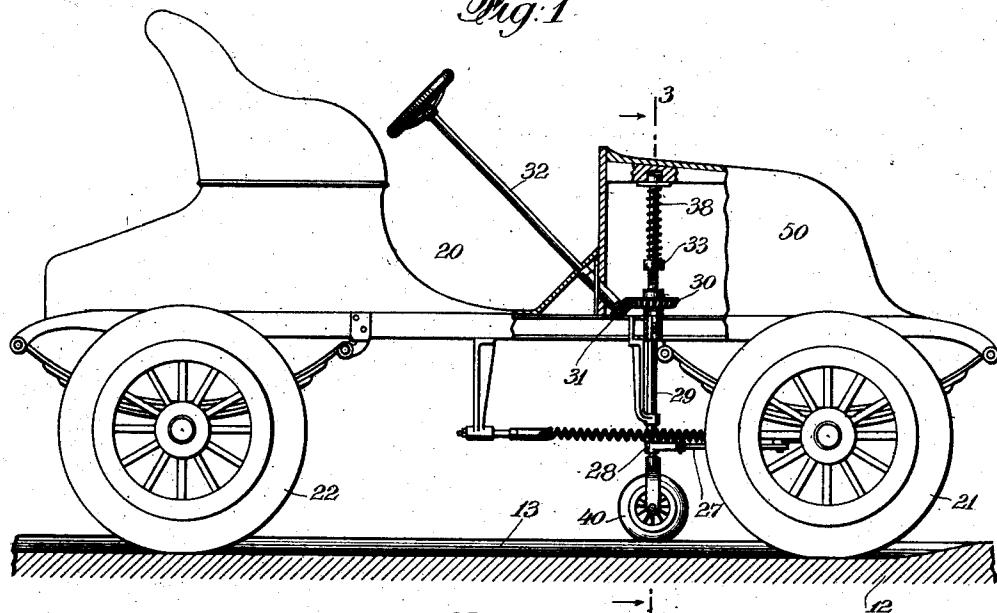
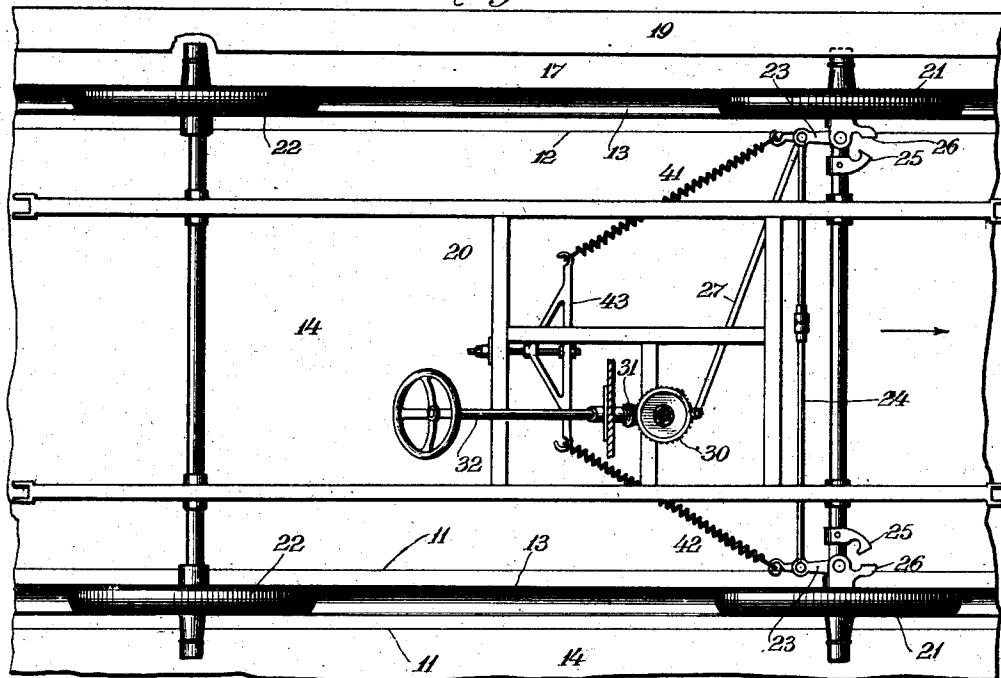


Fig. 2



Witnesses:
John J. Mittel
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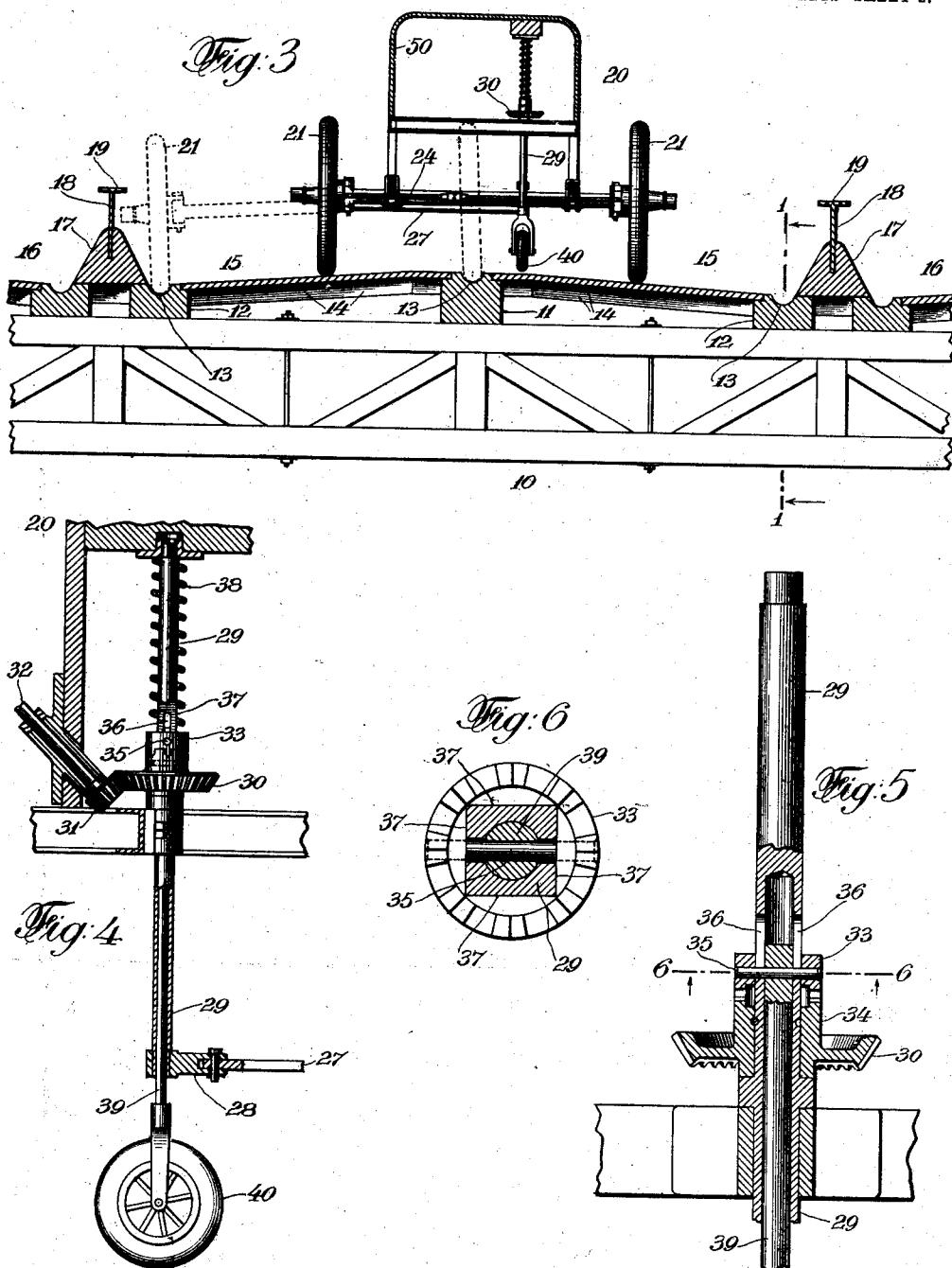
Charlie H. Gueritey Inventor
By his Attorney Chat. C. Gill

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UNITED STATES PATENT OFFICE.

CHARLES H. GUERITEY, OF BROOKLYN, NEW YORK.

AMUSEMENT APPARATUS.

No. 902,073.

Specification of Letters Patent.

Patented Oct. 27, 1908.

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To all whom it may concern:

Be it known that I, CHARLES H. GUERITEY, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and 5 State of New York, have invented certain new and useful Improvements in Amusement Apparatus, of which the following is a specification.

The invention relates to improvements in 10 amusement apparatus, and it consists in the novel structure and features hereinafter described, and particularly pointed out in the claims.

The object of the invention is to produce 15 an apparatus, for amusement purposes, comprising, preferably, a series of inclined roadways upon which vehicles of automobile character may run by gravity, said roadways being arranged side by side so that 20 automobiles rolling on them may have the appearance or effect of racing and each roadway being about equal to double the width of the vehicle and formed with gutters to, under certain conditions, receive the wheels 25 of the vehicle, thereby effecting the lowering of the vehicle and causing the main roadbed to drive upwardly a rod for disengaging the steering gear mechanism, thus depriving the operator of all control of the vehicle 30 without his realizing the cause thereof, the result being that the operator will endeavor to steer the vehicle from the gutters by turning the usual steering rod, but that his efforts will be without effect, because of the 35 uncoupling of the steering mechanism.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

40 Figure 1 is a side elevation, partly broken away and partly in section, of a vehicle mounted on a roadway and the whole being constructed in accordance with and embodying my invention; Fig. 2 is a top view of the 45 same, the body of the vehicle being omitted for the purpose of more clearly disclosing the steering gear mechanism and connected parts; Fig. 3 is a vertical transverse section of the same on the dotted line 3—3 of Fig. 50 1; Fig. 4 is an enlarged longitudinal section through a portion of the vehicle body and steering mechanism; Fig. 5 is an enlarged elevation, partly in section, of the upper portion of the same; and Fig. 6 is an enlarged

transverse section through the same on the 55 dotted line 6—6 of Fig. 5.

In the drawings, 10 designates a suitable supporting frame-work, upon which are arranged longitudinal stringers or beams 11, 12, which are grooved to form gutters 13, 60 and support the two equal sections 14, of the roadway or bed 15, as shown in Fig. 3. I will provide any desired number of the roadways 15, and in Fig. 3 show one roadway complete with adjoining roadways 16, 16, 65 partly broken away. At each side of each roadway is secured upon the stringers 12 a guard-rail 17 having inclined or downwardly diverging sides and supporting a vertical longitudinal plate 18 having a horizontal flange 19, the latter, when the wheels of the vehicle at one side are in a side gutter 13, extending above the hubs of said wheels and under all circumstances preventing the vehicle from riding up the guard-rail 17 to 75 any material extent.

The roadways 15 are about twice as wide as the vehicle, and the middle gutter is at the middle of the roadbed while the two side gutters are at the sides thereof adjacent to the guard-rails 17. The roadbed or roadway 15 is inclined in line with its length so that the vehicles may roll down the same by gravity, and said roadbed also inclines laterally from the middle gutter 13 85 so that there may be a tendency of the vehicle to move laterally and reach a side gutter 13 or take the position indicated by dotted lines in Fig. 3. The normal starting position of the vehicle is that represented by 90 full lines in Fig. 3, and when the vehicle is on the roadway with the middle gutter 13 between the wheels of the vehicle, the latter is left under the control, so far as steering is concerned, of the operator. The effort of 95 the operator will, therefore, be to maintain the vehicle in the middle of the roadway, whereas without experience on the part of the operator the vehicle will likely finally travel laterally and reach a side position 100 with respect to the roadway, the wheels then passing into the middle gutter 13 and one of the side gutters 13. The vehicle upon 105 reaching this position will continue to travel down the inclined roadway 15, but in the manner hereinafter described, the operator will have lost control of the steering mechanism and will be unable to cause the ve-

hicle to leave said middle and side gutters, it being intended that the operator shall not at such time understand the cause of his inability to steer the vehicle from said 5 gutters.

The vehicle, numbered 20, will preferably be of automobile-form but will not be provided with a driving engine since it is intended that the vehicle shall travel along 10 the longitudinally inclined roadway by gravity. The vehicle 20 is provided with front wheels 21 and rear wheels 22, the rear wheels being on a rigid axle and the front wheels on the usual short swiveled axles 15 having crank-arms 23 connected together by a rod 24 to insure corresponding movement to the left or right of said front wheels, this being in accordance with known vehicle construction. Stops 25, 26 are provided to prevent 20 undue movement or swiveling action of the front wheels 21. The rod 24 is connected by a rod 27 with a crank-arm 28 secured to the lower tubular end of a vertical rotary rod 29 (Fig. 4) which is suitably 25 mounted in the vehicle frame and just above the floor frame of the vehicle affords a bearing for the beveled gear wheel 30 (Fig. 5) which is in engagement with the pinion wheel 31 secured on the lower end of the 30 inclined steering rod 32. The gear wheel 30 may turn in either direction on the rod and will not rotate said rod to operate the crank-arm 28 and rod 27 except when it is placed in locking engagement therewith. 35 The means I have provided for locking the gear wheel 30 to the rod 29 so that the movement of said wheel may be imparted to said rod comprises a clutch formed of a vertically slidable member 33 which is toothed at its lower end and an upward extension 34 on the hub of the wheel 30 correspondingly provided with teeth, as more clearly illustrated in Fig. 4, said member 33 being fastened to the rod 29, although slidable thereon, by 40 reason of having a pin 35 extended transversely through it and through slots 36 in said rod 29, and also by reason of the fact that the rod 29 has flattened sides, as at 37, within and adjacent to said member 33. 45 When the clutch member 33 is in its lower position shown in Fig. 4, its lower toothed edge is in locking engagement with the gear wheel 30 and at such time any movement of the gear wheel will be imparted through the 50 clutch member 33 to the rod 29. I provide a spring 38 which normally retains the clutch member 33 and gear wheel 30 in interlocking engagement with each other, so that normally the rod 32 may be employed 55 to steer the vehicle. Within the tubular lower portion of the rod 29 is suspended a rod 39 carrying at its lower end a wheel 40 and at its upper end being secured within the rod 29 by means of the pin 35, as shown 60 in Fig. 5. The pin 35 rigidly connects the 65

rod 39 and clutch member 33 together, and hence any vertical movement of the rod 39 will be communicated to the clutch member 33.

In the normal condition of the parts of the vehicle the wheel 40 carried at the lower end of the rod 39 will be slightly above the surface of the roadway 15, and hence in the absence of conditions to cause the contrary to take place, the spring 38 will maintain 75 the clutch member 33 in engagement with the gear wheel 30, and this condition of the parts will not be disturbed so long as the operator in the vehicle properly steers the same so that the wheels remain on the roadway and do not enter the gutters 13. When, due to lack of skill or other cause, the wheels of the vehicle enter the gutters 13, the vehicle becomes lowered, said gutters forming depressions below the main surface of the 80 roadway, and under such condition the wheel 40 at the lower end of the rod 39 will strike the roadway and be pushed upwardly thereby, which upward movement of the rod 39 I utilize to force the clutch member 33 upwardly free of the gear wheel 30, thereby disconnecting the gear wheel from locking engagement with the rod 29 and leaving said wheel free to rotate around said rod without actuating the latter, this being the condition 85 of the apparatus presented in Fig. 1, the wheels 21, 22 being in the gutters or depressions and the wheel 40 being held pressed upwardly by the general surface of the roadway. 90

During the ordinary use of the vehicle the front wheels 21 may be turned either to the right or left by the rotation of the steering rod 32 in a usual manner, the movement of this rod being communicated through the 105 gear wheels 31, 30, clutch member 33 and rod 29 to the crank arm 38 and connecting rod 27.

I equip the vehicle 20 with two springs 41, 42 (Fig. 2), which are connected at their forward ends with the crank arms 23 and at their rear ends with the ends of a transverse bar 43 rigidly connected with the framework of the vehicle, the springs 41, 42 being normally under equal tension and thus 110 having no influence on the vehicle when the front and rear wheels of the latter are in direct alinement. During the use of the vehicle on the roadway 15 the front wheels will, from time to time, be turned and get 115 out of alinement with the rear wheels, and upon the vehicle moving laterally on the roadway 15, the two front wheels may enter the middle and side gutters in advance of the rear wheels, and under all of these conditions the springs 41, 42 are provided for the purpose of aiding in the alining up of the rear wheels 22 with the front wheels 21. If the vehicle should move to the left and the front wheels should enter gutters 13, 120

while the rear wheels 22 are nearer the middle of the roadway, the spring 41 would be extended and would exert its force to move the rear body of the vehicle in a direction 5 toward alinement with the front wheels 21. If the front wheels should incline toward the right the spring 42 would be extended and tend to draw the body of the vehicle and rear wheels 22 into alinement 10 with the front wheels. The purpose of the springs 41, 42 is to keep the body of the vehicle and wheels in perfect alinement, so far as may be possible, without interfering with the steering apparatus or obviating 15 the necessity for such apparatus. In the employment of the apparatus the vehicles 20 will be given their normal position shown in Fig. 3 in the middle of the roadways and the operators will endeavor to steer the vehicles and keep them in line with the middle 20 of the roadway, but in some instances, the lateral inclination of the roadways and other causes will finally result in the vehicles moving laterally and the wheels thereof entering 25 the gutters 13, whereupon the vehicles being thereby lowered, the wheel 40 on the lower end of the rod 39 will, by coming into contact with the surface of the roadway, be pushed upwardly and move the clutch member 33 out of engagement with the gear wheel 30, with the result that although the vehicles do not stop their traveling movement down the inclined roadways 15, the steering apparatus will have been rendered 30 inoperative and the operators will, while endeavoring to steer the vehicles from the gutters, be unable to do so. The gear wheels 30, 31 are inclosed by the front hood or casting 35 50 of the vehicle, and thus the operators 40 are not permitted to know, on losing control of the vehicles, that the gear-wheel 30 is turning idly.

In Fig. 1 I illustrate the vehicle 20 as having its steering mechanism uncoupled 45 and also as having reached the end of its travel. In employing the apparatus hereinbefore described with several roadways and a vehicle on each roadway, a race may be run although the vehicles do descend the 50 roadways by gravity, since the vehicle which is most accurately guided will likely reach the end of the line of travel first. Lack of skill on the part of the operator will result in the vehicle moving from side to side and 55 in its wheels finally entering the grooves or gutters, with the consequent uncoupling or disconnecting of the steering mechanism whereby the vehicle becomes beyond the control of the operator without his comprehending 60 the reason why or understanding the exact conditions.

What I claim as my invention and desire to secure by Letters Patent, is:

1. An amusement apparatus comprising a 65 longitudinally inclined roadway and a

wheeled vehicle to travel thereon by gravity, said vehicle having steering mechanism and a projecting rod for uncoupling the same when moved in one direction, and said roadway having a longitudinal depression into 70 which the traveling vehicle if not properly steered may descend for effecting the movement of said rod to render inoperative said steering mechanism; substantially as set forth. 75

2. An amusement apparatus comprising a roadway which inclines longitudinally and also laterally from its center line to its sides, and a wheeled vehicle to travel thereon by gravity, said vehicle having steering mechanism and a projecting rod for uncoupling the same when moved in one direction, and said roadway having a longitudinal depression into which the traveling vehicle if not properly steered may descend for effecting 80 the movement of said rod to render inoperative said steering mechanism; substantially as set forth. 85

3. An amusement apparatus comprising a roadway which is inclined longitudinally and also laterally from its center line to its sides and provided at its center and at each side with a longitudinal gutter, and a wheeled vehicle to travel thereon by gravity provided with steering mechanism and an uncoupling rod therefor which extends downwardly into near relation to said roadway and which by contact with said roadway when the vehicle wheels enter the gutters and thus become lowered will be moved to 90 uncouple the steering mechanism; substantially as set forth. 95

4. An amusement apparatus comprising a longitudinally inclined roadway and a wheeled vehicle to travel thereon by gravity 105 provided with steering mechanism and an uncoupling rod therefor having on its lower end a wheel and extending downwardly into near relation to said roadway so as to be engaged and moved to its uncoupling position thereby should said vehicle become lowered to effect such engagement, said roadway being provided with a longitudinal depression into which the vehicle will descend and thus become lowered if it is not properly steered; 110 substantially as set forth. 115

5. An amusement apparatus comprising a roadway which is inclined longitudinally and also laterally from its center line to its sides and provided at its center and at each side with a longitudinal gutter, and a wheeled vehicle to travel thereon by gravity having its front wheels on short pivoted axles provided with crank-arms, a rod connecting said crank-arms, rearwardly extending converging springs (41, 42) connected at their front ends with said crank-arms and at their rear ends to a rigid part of the vehicle, steering mechanism and an uncoupling rod therefor which extends downwardly into near rela- 120 125 130

tion to said roadway and which by contact with said roadway when the vehicle wheels enter the gutters and thus become lowered will be moved to uncouple the steering mechanism; substantially as set forth.

6. An amusement apparatus comprising a longitudinally inclined roadway and a wheeled vehicle to travel thereon by gravity having its front wheels on short pivoted axles provided with crank-arms, a rod connecting said arms, rearwardly extending converging springs (41, 42) connected at their front ends with said crank-arms and at their rear ends to a rigid part of the vehicle, steering mechanism, and an uncoupling rod therefor having on its lower end a wheel and extending downwardly into near relation to said roadway so as to be engaged and moved to its uncoupling position thereby should said vehicle become lowered to effect such engagement, said roadway being provided with a longitudinal depression into which the vehicle will descend and thus become lowered if it is not properly steered; substantially as set forth.

7. An amusement apparatus comprising a roadway and a wheeled vehicle to travel thereon provided with steering mechanism and an uncoupling rod therefor having on its lower end a wheel and extending downwardly into near relation to said roadway so as to be engaged and moved to its uncoupling position thereby should said vehicle become lowered to effect such engagement, said roadway being provided with a depression into which the vehicle will descend and thus become lowered if it is not properly steered; substantially as set forth.

8. An amusement apparatus comprising a roadway and a wheeled vehicle to travel thereon having its front wheels on short pivoted axles provided with crank-arms, means connecting said arms, a vertical rotatory rod (29) having at its lower end an arm in operative connection with said crank-arms, a gear wheel (30) initially free to rotate on said rod, a steering rod (32) having a gear-wheel (31) in mesh with said gear-wheel 30, a clutch sleeve (33) keyed on said rod and adapted to interlock with said gear wheel 30, a spring for normally holding

said clutch sleeve in its operative position, and an uncoupling rod (39) connected with said clutch sleeve and extending downwardly into near relation to said roadway 55 so as to be engaged and moved to its uncoupling position thereby should said vehicle become lowered to effect such engagement, said roadway being provided with a longitudinal depression into which the vehicle will descend and thus become lowered if it is not properly steered; substantially as set forth.

9. An amusement apparatus comprising a roadway and a wheeled vehicle to travel 65 thereon having its front wheels on short pivoted axles provided with crank-arms, means connecting said arms, a vertical rotatory rod (29) having at its lower end an arm in operative connection with said crank-arms, a gear wheel (30) initially free to rotate on said rod, a steering rod (32) having a gear-wheel (31) in mesh with said gear-wheel 30, a clutch sleeve 33 on a polygonal portion of said rod above said gear 75 wheel 30 and adapted to interlock with said gear-wheel 30, a spring for normally holding said clutch sleeve in its operative position, and an uncoupling rod within the lower tubular portion of said rod (29) and 80 connected at its upper end by a transverse pin with said clutch sleeve, said rod 29 having vertical slots through which said pin extends and which permit of a vertical movement of said sleeve and rod 39, said rod 39 85 extending downwardly into near relation to said roadway so as to be engaged and moved to its uncoupling position thereby should said vehicle become lowered to effect such engagement, and said roadway being provided with a longitudinal depression into 90 which the vehicle will descend and thus become lowered if it is not properly steered; substantially as set forth.

Signed at New York city, in the county 95 of New York, and State of New York, this 8th day of August A. D. 1908.

CHARLES H. GUERITEY.

Witnesses:

HERMAN GUSTOW,
CHAS. C. GILL.