W. H. ZORN.

AUTOMOBILE GATE.

APPLICATION FILED SEPT. 10, 1917.

1,253,453.

Patented Jan. 15, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

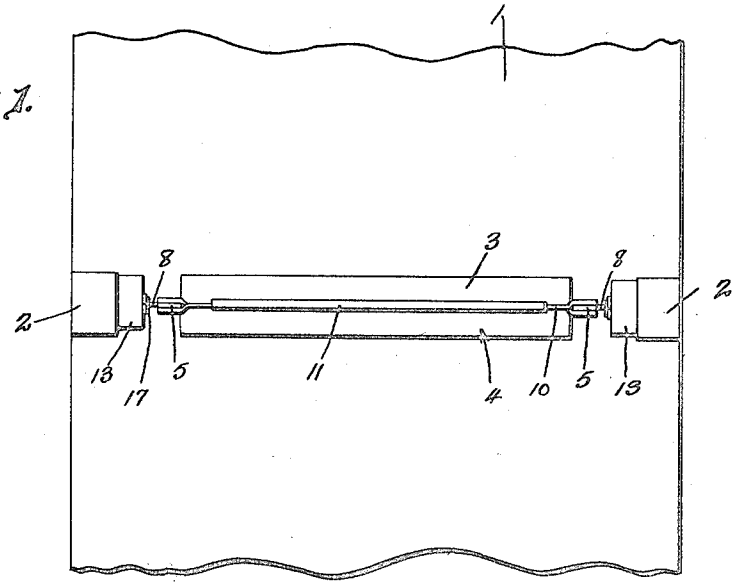


Fig. 3.

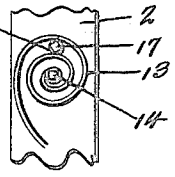
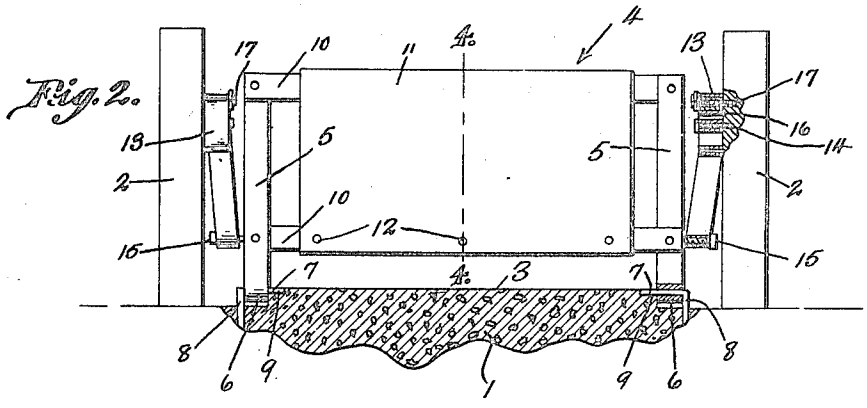


Fig. 4.



Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 5.

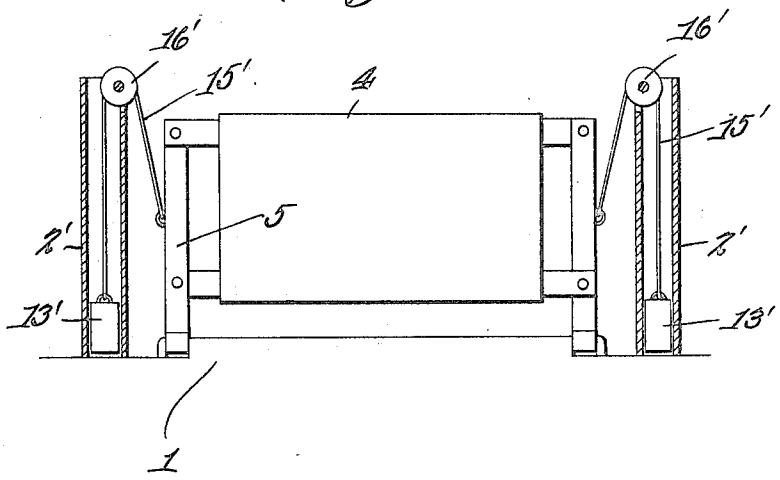
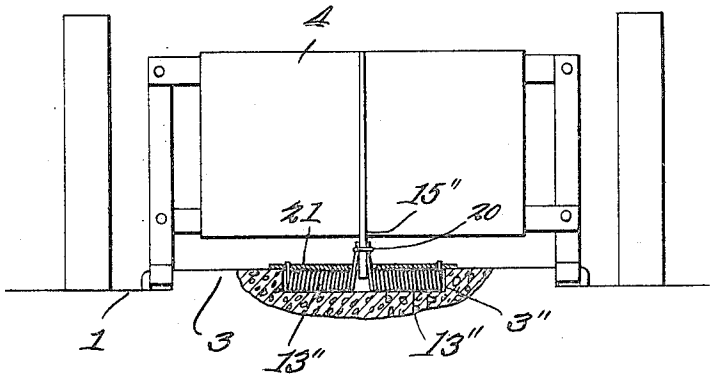


Fig. 6.



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UNITED STATES PATENT OFFICE.

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AUTOMOBILE-GATE.

1,253,453. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed September 10, 1917. Serial No. 190,563.

To all whom it may concern:

Be it known that I, WILLIAM H. ZORN, a citizen of the United States, residing at Harrisburg, in the county of Banner and State of Nebraska, have invented a new and useful Automobile-Gate, of which the following is a specification.

The present invention appertains generally to gates, and aims to provide a novel and improved gate for an automobile driveway, permitting automobiles to readily pass the gate without stopping, but preventing farm stock from passing through the gateway.

It is the object of the invention to provide a gate of the nature indicated of such construction that it will be automatically opened by an automobile passing it, and will close automatically after the machine has passed, therefore, requiring no attention on the part of the driver to open or close the gate.

It is also the object of the invention to provide a gate construction which will be practical and effective in use, as well as being simple, substantial and inexpensive in construction.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a plan view of the gate.

Fig. 2 is an elevation thereof, a portion of the driveway being shown in section.

Fig. 3 is a detail view illustrating one of the springs.

Fig. 4 is a sectional detail of the gate taken on the line 4—4 of Fig. 2.

Fig. 5 is an elevation showing a modification in the means for raising the gate.

Fig. 6 is a similar view showing another modification in the gate raising means.

The gate is preferably used on a concrete or similar driveway 1, that portion of the driveway adjacent to the gate, at least, being of concrete or like material. Upstanding gate posts 2 are provided at the opposite sides of the driveway and define the gateway therebetween, the base or driveway 1 having a transverse raised portion 3 between said posts.

The gate 4 is of sheet metal or other suitable material, and embodies the stiles 5 at the ends thereof near the posts 2 and provided with bearings 6 at their lower ends journaled upon the spindles 7 of rods 8 or equivalent members embedded in the base or driveway 1 between the ends of the raised portion 3 and posts 2. The spindles 7 project toward one another and their ends are seated in notches 9 in the ends of the portion 3, whereby to provide firm pivots for the gate, enabling the gate to swing in either direction longitudinally of the driveway. The frame of the gate includes in connection with the stiles 5, horizontal rails 10 riveted or otherwise secured at their ends to the stiles, and a doubled sheet metal buffer plate 11 straddles the rails 10, the bend of the plate seating on the upper rail, and said plate being riveted or otherwise secured, as at 12, to the lower rail to hold it in place on the frame of the gate. The plate 11 is for the contact of the wheels of the automobile thereagainst, the front wheels of an automobile in hitting the plate 11 swinging the gate downwardly flat onto the driveway substantially flush with the portion 3, so that the machine can pass over the gate without difficulty.

In order to raise the gate to closed position, there is provided a pair of spiral springs 13 having their inner ends embracing or otherwise secured to spindles 14 fastened to the posts 2, and the outer terminals of the springs extend downwardly and embrace outstanding spindles 15 fastened to the frame of the gate near the bearings 6 and pivots thereof. The upper portion of the outer convolution of each spring rests upon a roller 16 carried by a spindle 17 secured to the respective post above the spindle 14.

In operation, when the automobile reaches the gate, the front wheels thereof will, in contacting with the plate 11 of the gate, swing the gate downwardly in the direction in which the automobile is moving on the driveway, so that the wheels can readily pass over the gate. The gate in being swung downwardly in either direction will pull the outer terminals of the springs 13 with the gate, thereby pulling the springs over the rollers 16 and winding the springs up. Therefore, after the automobile has passed the gate, the springs in recoiling will swing

the gate back up to closed position, thereby preventing the farm stock from passing through the gateway, although automobiles can readily pass the gate without the necessity of stopping or manually opening and closing the gate.

In the modification shown in Fig. 5, the posts 2′ are hollow and weights 13′ are movable vertically therein, said weights being connected by cords or flexible elements 15′ with the stiles of the gate 4 and said cables or cords pass over pulley wheels 16′ carried by the upper ends of the posts. Thus, when the gate is swung downwardly in either direction, the weights 13′ are raised, and said weights in gravitating will raise the gate after the vehicle has passed over it.

In Fig. 6, a depending rod or member 15″ is secured to the gate 4 and coiled torsion springs 13″ are fastened, as at 20, to the rod 15″ for raising the gate from either side. These springs 13″ are preferably housed in a recess 3″ in the driveway below the gate, and said recess can be covered by a cover plate 21″ to which those ends of the springs opposite the rod 15″ are fastened.

Having thus described the invention, what is claimed as new is:

1. A structure of the character described embodying a gate pivoted to swing in either direction for the passage of a vehicle thereover, a post, a spiral spring having its inner end secured to the post and having its outer end secured to the gate for swinging the gate to an upstanding position, and means carried by the post over which the spring moves when pulled by the gate.

2. A structure of the character described embodying a base; a gate embodying stiles having their lower ends pivoted to the base, rails secured to the stiles, and a double plate straddling and secured to the rails for the passage of vehicle wheels thereover; and means for swinging the gate to an upstanding position.

3. A structure of the character described embodying a base, posts, the base having a raised portion between the posts over which vehicles pass, pivot members attached to the base and ends of said portion, a gate above said portion having bearings engaging said pivot members to swing downwardly in either direction, and means for swinging the gate to an upstanding position in either direction.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. ZORN.

Witnesses:
C. S. Page,
John B. Heintz,

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