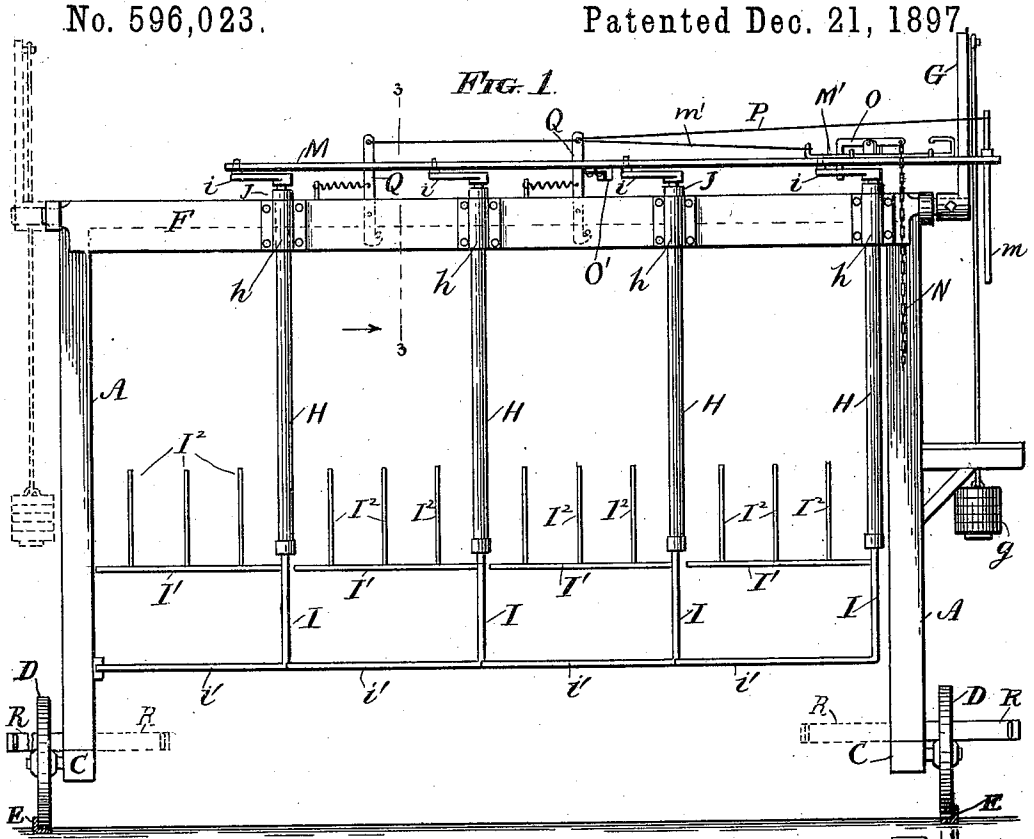
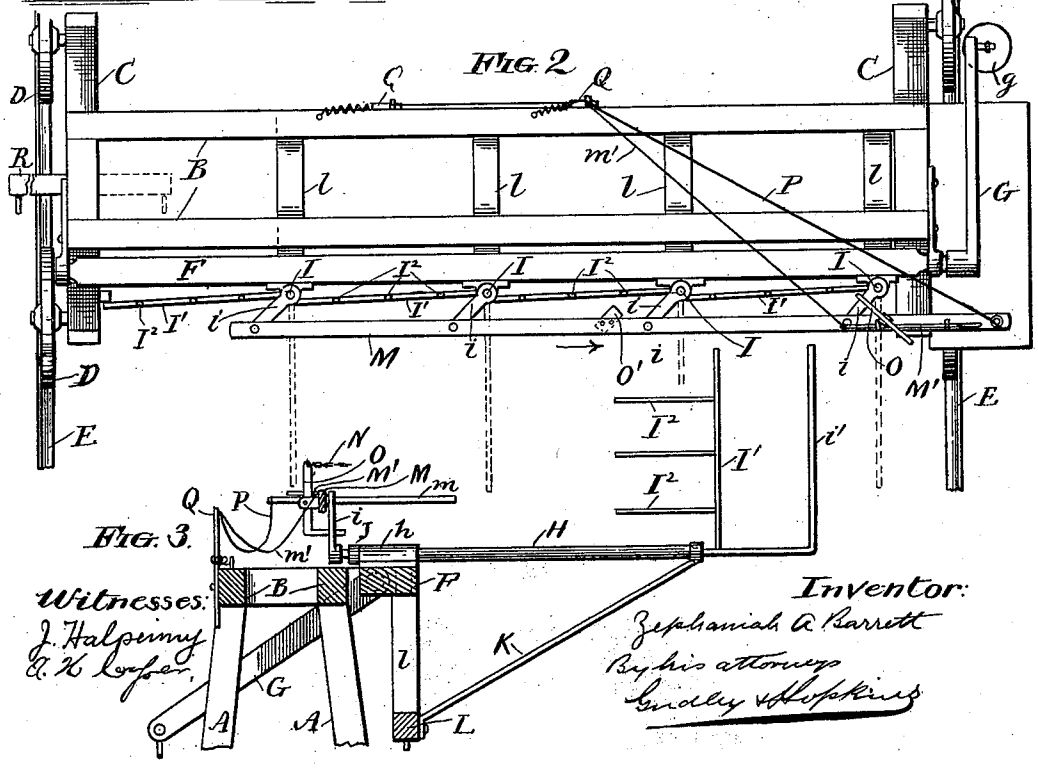
(No Model.)

Z. A. BARRETT.

GATE.

No. 596,023. Patented Dec. 21, 1897.





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UNITED STATES PATENT OFFICE.

ZEPHANIAH A. BARRETT, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JAMES J. RUSSELL, OF MUSCATINE, IOWA.

GATE.

SPECIFICATION forming part of Letters Patent No. 596,023, dated December 21, 1897.

Application filed December 16, 1893. Renewed June 9, 1896. Serial No. 594,878. (No model.)

To all whom it may concern:

Be it known that I, ZEPHANIAH A. BARRETT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gates, of which the following is a specification, reference being had to the accompanying drawings, which are made a part hereof, and in which—

Figure 1 is a front elevation of a gate embodying the invention. Fig. 2 is a plan view thereof. Fig. 3 is a vertical section of a portion thereof on the line 3 3 of Fig. 1

The object of the present invention is to improve the construction of that class of gates that are adapted to be arranged across racetracks for insuring the even starting of all of the contestants; and the invention consists in the features of novelty that are particularly pointed out in the claims hereinafter.

The frame of the apparatus may be of any desired construction. As shown, it comprises uprights A, located at opposite sides of the roadway, and a crosstree B, extending from one of these uprights to the other, the uprights being of such height that they support the crosstree in horizontal position about twelve feet above the roadway. In the drawings these uprights and the crosstree are each formed of two timbers suitably secured to each other and stayed by braces; but this is to be understood as being merely illustrative and not as one of the limitations of the invention. The uprights are stepped to sills C of sufficient length to prevent the apparatus from tipping over, and each of the sills is provided with two or more wheels or rollers D, that rest upon parallel tracks E, arranged upon opposite sides of the roadway and parallel therewith.

To the upper portion of the frame is journaled a horizontal shaft F, which extends across the roadway and has attached to one of its ends an arm G, upon which is hung a counterbalance *g*. Secured to the rock-shaft are any desired number of hollow tubes H, which depend vertically and which are for the purpose of sustaining against lateral flexure a number of rock-shafts I, one of which shafts occupies each of said tubes. Preferably the tubes are threaded at their upper ends and screwed into correspondingly-threaded boxes *h*, that are secured to the rock-shaft F.

In order to sustain the rock-shafts I vertically, each is provided with a fixed collar J, which bears upon the top of its tube and box. In order to sustain the tubes against lateral flexure, each is provided with a brace K, which extends from its lower end upward and rearward to a beam L, which is connected to the rock-shaft F by braces *l*, so that the several parts F L *l* form in effect a swinging frame.

Each of the rock-shafts I is provided at its upper end with a crank-arm *i*, and the several arms *i* are pivotally connected at their extremities to a floating bar M, provided at one end with a handle *m*, which depends to within easy reach of the operator, who may stand on a platform arranged on the side of the frame. Each of the rock-shafts is also bent at a point below the end of the tube in which it fits to form a horizontal arm *i'*, which is located about at the height of a horse's breast and is of sufficient length to extend to the next rock-shaft when placed in proper position. Above this arm *i'* (say about one foot) a second arm I' is secured to the rock-shaft, and to this arm are secured a number of bars I^2, which project upward. The object of these arms I' and bars I^2 is to deter horses from attempting to jump the arms *i'*, which they would do if these latter only were used.

It will be seen that the rock-shaft F and the parts H, I, I', I^2, *i'*, and K constitute, in effect, one gate mounted to swing upon a horizontal axis, and that this gate is made up of a number of smaller gates comprising the parts I', I^2, and *i'*, each mounted to swing upon a vertical axis.

In Fig. 1 the apparatus is shown in readiness for the start. At the given signal the operator pulls a cord N, which disengages a catch O from the arm *i* of one of the vertical rock-shafts and leaves said rock-shaft free to move. He then pulls the handle *m*, so as to move the floating bar M in the direction of the arrow, causing all of the rock-shafts I to make a quarter-turn, thus opening the spaces between the several tubes and permitting the horses to pass. A stop O', carried by the bar M, engages the arm *i* of one of the rock-shafts

I and arrests the movement of the shafts when they have completed a quarter-turn and brought all of the small gates into parallel positions.

To the bar M or an arm projecting upward therefrom is connected a cord P, which extends to all of a number of latches Q, that are pivoted to the crosstree and engage the swinging frame for holding it in position. (Shown in Fig. 1.) This being so, it will be seen that the movement of the bar M, in addition to turning the rock-shafts I, moves all the latches out of engagement with the swinging frame, thereby liberating the said frame and permitting the counterbalance-weight *g* to lift the gate to the position shown in Fig. 3, leaving the track entirely unobstructed, so that when the horses again reach the starting-point there will be nothing against which it is possible for them to strike. If the small gates alone were operated and the large gate not afterward elevated, the rock-shafts and their accessories would be left projecting downward in such positions that there would be great danger of their being run into as the horses passed at full speed in entering upon the second and succeeding laps.

In order to permit the gate to be moved into the position last described without operating the smaller gates, a sliding bar M′ is mounted upon the floating bar M and is connected by cord *m′* with the several latches Q, so that by pulling upon said bar the catches liberate the swinging gate and permit it to be lifted, as described. I prefer, however, to open the small gates first, because they are less ponderous and can therefore be opened in very much less time than is required to open the large gate, of which they are component parts.

When a flying start is to be made, draft-horses are hitched to horizontal arms R, one of which is secured to each side of the frame, so that the entire apparatus may be drawn along in the direction of the track until the horses get under way and reach the starting-point, whereupon the gate is opened, as already described, to permit them to pass. It will be understood that the tracks E are of sufficient length to allow the draft-horses to get the structure under considerable speed before the starting-point is reached and to permit the structure to be again brought to rest before the end of the track is reached. The arms R for the attachment of the draft-horses may be located either upon the inside or outside of the frame, and any suitable means—as, for example, thills or a tongue—may be used for hitching the horses to them.

In the drawings I have shown the gate as comprising four small gates; but it will be understood that either a greater or less number of these small gates may be used. It will be understood also that where the size of the apparatus is such that it cannot be operated conveniently by one weight *g* a second weight and lever, such as G, may be secured to the other end of the rock-shaft F, as indicated by dotted lines. The number of latches Q used for holding the large gate in place will depend upon the size of the apparatus.

So far as I am aware I am the first to mount a gate or obstruction of any description upon a movable frame which is supported by wheels or rollers so arranged that the frame may be moved in the direction of the roadway or track, and I therefore desire to have it understood that, so far as this feature of my invention is concerned, it is not limited to a gate or obstruction of any particular construction.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a removable obstruction arranged across a track or roadway, of movable supports therefor arranged upon opposite sides of the track or roadway and means for suddenly removing said obstruction, substantially as set forth.

2. The combination with a removable obstruction arranged across the track or roadway and movable in the direction of said track or roadway, of means for moving it in said direction and means for suddenly removing it, leaving the track or roadway clear, substantially as set forth.

3. The combination with a removable obstruction arranged across the track or roadway, of supports therefor arranged upon opposite sides of the track or roadway, means for moving said supports in the direction of the track or roadway and means for suddenly removing the obstruction, leaving the track or roadway clear, substantially as set forth.

4. The combination with a removable obstruction arranged across the track or roadway, of supports therefor arranged upon opposite sides of the track or roadway, ways upon which said supports are movable in the direction of the track or roadway, means for moving said supports, and means for suddenly removing the obstruction, substantially as set forth.

5. The combination, with a movable frame having wheels whereby it is supported and adapted to be moved in the direction of a track or roadway, of a gate carried by said frame and crossing the roadway, substantially as set forth.

6. The combination, with a movable frame having wheels whereby it is supported and adapted to be moved, of parallel tracks upon which said wheels rest, and a gate carried by the frame and occupying, when closed, a plane transverse to the direction of said tracks, substantially as set forth.

7. The combination, with a frame having uprights, and a crosstree crossing the roadway and extending from one of said uprights to the other, of wheels whereby said frame is supported and adapted to be moved in the direction of the roadway, and a gate carried by the frame and crossing the roadway, substantially as set forth.

8. The combination, with a crosstree located above the roadway, of a rock-shaft supported thereby and extending downward therefrom, terminating at its lower end above the roadway, a gate carried by said rock-shaft, and means for partially rotating said rock-shaft, substantially as set forth.

9. The combination, with a suitable support, of a number of tubes H, a rock-shaft located in each of said tubes, a crank-arm on the upper end of each of said rock-shafts, and a gate carried by each of said rock-shafts, substantially as set forth.

10. The combination, with a suitable support located above the roadway, of a gate supported thereby and adapted to cross the roadway, and means for elevating said gate far enough above the roadway to leave it unobstructed, said gate being made up of a number of smaller gates adapted to swing horizontally, substantially as set forth.

11. The combination, with a suitable support located above the roadway, of a gate hinged at its upper edge and adapted to swing in a vertical plane, said gate being made up of a number of smaller gates each adapted to swing in a horizontal plane, substantially as set forth.

12. The combination, with a suitable frame, of the rock-shaft F, the weighted lever G secured thereto, the vertical rock-shafts I journaled to the rock-shaft F, the crank-arms *i* at the upper ends of the rock-shafts I, the floating rod M to which said crank-arms are pivotally connected, and a number of gates each secured to one of said vertical rock-shafts, substantially as set forth.

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