No. 893,461. PATENTED JULY 14, 1908.

A. F. DAYTON.

BARRIER FOR RACE COURSES.

APPLICATION FILED DEC. 4, 1907.

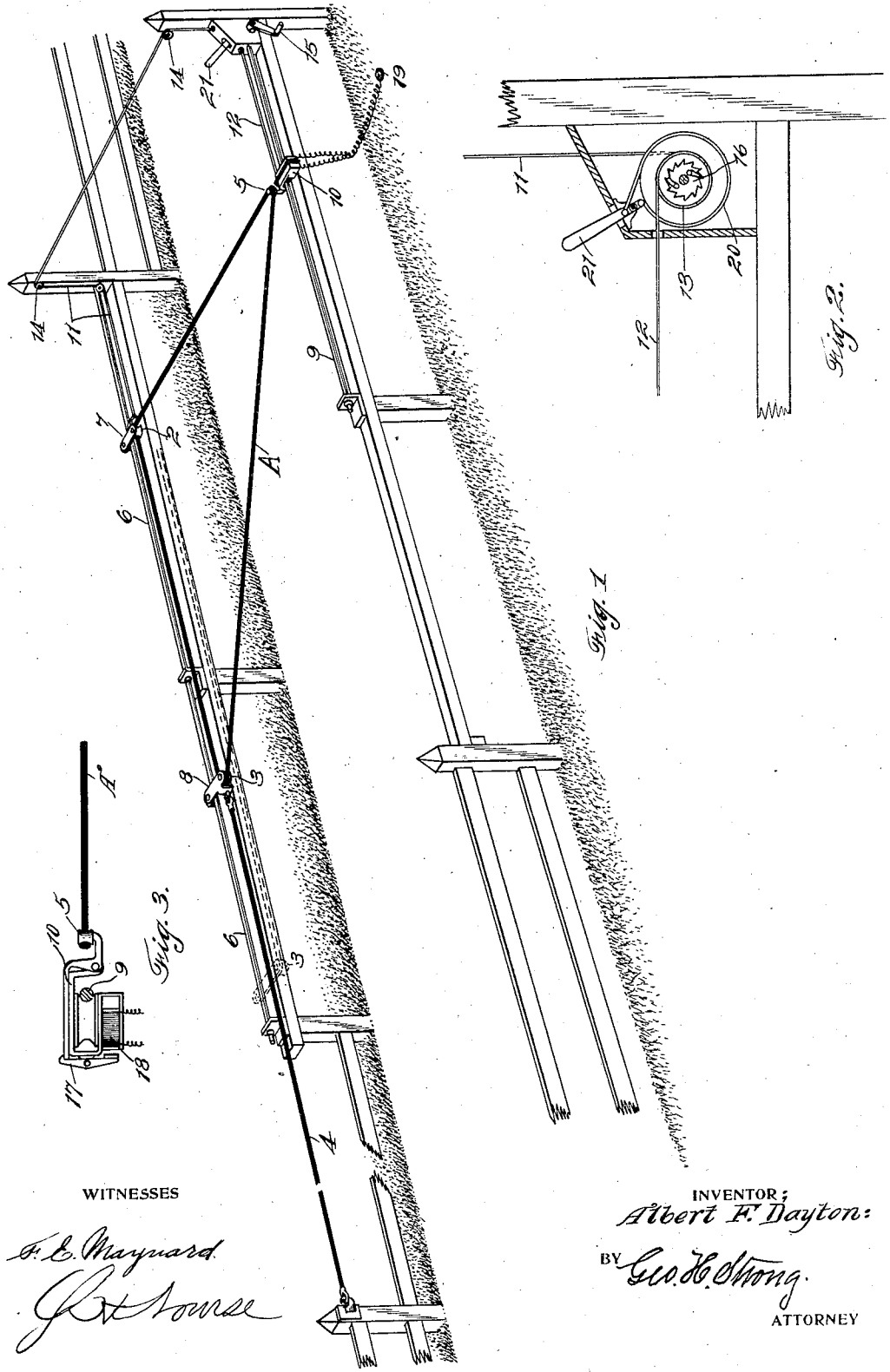

Fig. 1

Fig. 2.

Fig. 3.

WITNESSES

F. E. Maynard.

J. R. Towse

INVENTOR;

Albert F. Dayton:

BY Geo. H. Strong.

ATTORNEY

UNITED STATES PATENT OFFICE.

ALBERT F. DAYTON, OF OAKLAND, CALIFORNIA.

BARRIER FOR RACE-COURSES.

No. 893,461. Specification of Letters Patent. Patented July 14, 1908.

Application filed December 4, 1907. Serial No. 405,087.

To all whom it may concern:

Be it known that I, ALBERT F. DAYTON, citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Barriers for Race-Courses, of which the following is a specification.

My invention relates to starting-gates, or barriers for use on race-courses, and is designed for the purpose of alining the several contestants, for the start.

The main object of the invention is to provide a movable barrier, which will allow of a "walk-up" start.

It also has other objects and advantages, as will be hereinafter manifest.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a perspective view representing the application and mode of operation of the invention. Fig. 2 is a detail of the winding and unwinding mechanism. Fig. 3 is a detail showing the electrically operated trip for the barrier.

A represents an endless elastic cord, or an endless cord or tape having an elastic stretchable and contractible section, sufficient for the purposes and functions of the invention. This endless elastic tape passes around two pulleys 2—3 arranged on one side of the track, one of these pulleys, as 3, having an elastic or stretchable counter connection 4; the other pulley 2 being suitably supported and held, so that when a tension is exerted on the barrier cord A sufficient to stretch the elastic cord 4, the pulley 3 will move towards the pulley 2 to allow the cord A to be stretched in the form of a right-angled triangle across the track, to be suitably secured to a detent 5, as shown in Fig. 1. On the releasing of the detent 5, the combined contractile action of the cords A—4 will draw the barrier over against the opposite side of the track, out of all interference with the horses which are to run. This represents the invention in its simplest form. In order, however, to provide for a "walk-up" start, as first mentioned, I have arranged suitable mechanism by which the pulley 2 upon the one side of the track, and the detent member 5 on the opposite side of the track, may be moved forward or back in unison. For this purpose, one side of the track is provided with a rigid rod, guide-way or track-rail 6, on which the carriages 7—8 of the respective pulleys 2—3 are free to run in either direction. On the opposite side of the track is arranged a similar track-rail 9, on which the carriage 10 carrying the detent or latch member 5 is adapted to run. The carriage 7 and the carriage 10 are connected to respective ropes or cables 11—12, which are both attached to the same drum 13 on one side of the track; the cable 11 passing either under, or, as here shown, over the track, and around suitable guide sheaves 14 to connect to the drum 13. This drum is provided with a crank 15, or other suitable means, to wind it up, and it may be held against unwinding by the pawl and ratchet mechanism 16, as shown in Fig. 2.

The detent member 5 may be of any suitable construction, and operated by any suitable means. As here shown, this detent comprises a roller-mounted hook member which is pivoted to the carriage 10 and is normally held in locked position, so as to retain the elastic barrier A when the latter is stretched, as shown in Fig. 3, by suitable means, as the latch 17. This latch member 17 carries an armature which is adapted to be attracted by a magnet 18, when the latter is energized, and release the hook member 5 and allow the barrier to contract and fly to the opposite side of the track; the excitation of the magnet being controlled by a switch or push button 19 and suitable connections with the battery and the coil.

To operate: The elastic barrier A being suitably engaged around the pulleys 2—3, and these pulleys being brought as close together as convenient, said elastic cord A is then stretched across the track and engaged with the roller on the hook 5, which latter stands directly opposite the pulley 2. This stretching of the endless barrier A crosswise of the track places the barrier, and also the elastic counter connection 4 for pulley 3, on tension. The length and quality of the respective elastic members A—4 are such that this stretching movement of the barrier across the track is not only possible, but whenever the latch member 5 is tripped, the inherent contractile qualities of the parts 4 and A will cause these parts almost instantly to fly into normal inert alining position, substantially as shown in dotted lines in Fig. 1. Having stretched the barrier crosswise of the track and connected it to the latch 5, the

crank 15 is then operated to wind up the drum, and so move the carriages 7 and 10 in unison backwards along the track, always maintaining the barrier section of the cord A perpendicular to the track. Having wound up the drum, the horses are lined up behind the barrier, and at the proper moment the starter allows the drum to unwind at such a regulated rate of speed that the barrier will move forward in advance of the horses at walking speed. Any suitable form of governing device may be employed to regulate this unwinding movement. In the present instance, I have simply shown a band-brake 20, which is connected to a lever 21 under the control of an operator. By slacking up more or less on this lever 21, the unwinding speed of the drum is greater or less, as desired. With the horses arranged behind the barrier, and the unwinding of the drum begun, the barrier moves forward with the horses walking behind the barrier. The distance to which the barrier may move forward in advance of the horses may be greater or less, according to circumstances, the object being to allow the horses to be in motion, and with all the horses having an even start when the word "Go" is given. With the horses thus in motion, and properly lined up, the starter at the desired moment presses on the button 19 which releases the catch 17, thereby tripping the detent 5 and allowing the elastic properties of the cords 4 and A to draw in the barrier by rapid movement to the other side of the track, into the position shown in dotted lines, Fig. 1, and entirely out of interference with the contestants on the track.

The carriages 7, 8 and 10, and the end of the elastic cord 4, are easily detachable, so that this portion of the apparatus may be moved quickly to any part of the track and there connected with corresponding guides and operating means, in order to adapt the same device to races of any length on the same track.

While it is preferred to make the endless barrier A entirely of rubber, or like elastic medium, it is possible to practice the invention by a cord wherein the shorter section which is stretched across the track may be of non-elastic material; the essential feature being the use of an endless expansible, contractible cord having two points of support on one side of the track, with one support movable towards and from the other, and said cord being stretchable across the track in triangle fashion, to connect with a third point of support, or releasable detent, substantially as herein shown and described. In addition to this, is the means provided by the drum 13 and its adjuncts, for moving the stretched barrier along the track, for the additional purpose of giving the contestants a "walk-up" start, as previously described.

It is possible that various changes and modifications, in form or otherwise, may be made in the invention, without departing from the principle thereof. I do not wish to be considered as limiting myself to the specific construction herein shown and described.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a barrier for race-courses, the combination of an endless cord passing around two pulleys at one side of the track, one of which pulleys is movable toward and from the other, an elastic counter connection for the movable pulley, and a detent member on the opposite side of the track, with which said cord may be connected.

2. In a barrier for race-courses, the combination of an endless elastic cord passing around two pulleys at one side of the track, one of which pulleys is movable toward and from the other, an elastic counter connection for the movable pulley, and a detent member on the opposite side of the track, with which said cord may be connected.

3. In a barrier for race-courses, the combination of an endless cord passing around two pulleys at one side of the track, one of which pulleys is movable toward and from the other, said cord capable of being stretched across the track, and of contracting, a detent member on the opposite side of the track, with which the cord may be connected, and impelling means connecting with the movable pulley.

4. In a barrier for race-courses, the combination of an endless cord passing around two pulleys at one side of the track, one of which pulleys is movable toward and from the other, an elastic counter connection for the movable pulley, a detent member on the opposite side of the track, with which said cord may be connected, and means to move the barrier along the track.

5. A barrier for race-courses comprising an elastic barrier member having two points of support on one side of the track, one of said points movable toward and from the other, a counter elastic connection for the movable point of support, said counter connection operative normally to draw said barrier section to that side of the track, and a detent on the opposite side of the track engageable with said barrier section.

6. A barrier for race-courses comprising an elastic barrier member having two points of support on one side of the track, one of said points movable toward and from the other, a counter elastic connection for the movable point of support, said counter connection operative normally to draw said barrier section to that side of the track, a detent on the opposite side of the track engageable with said barrier section, and means for moving said

detent and the opposed barrier support simultaneously along the race-course.

7. A barrier for race-courses comprising a flexible barrier member having two points of support on one side of the track, one of said points being movable toward and from the other, a resilient counter connection for the movable point of support, normally operative to extend said barrier member in line with the track, and a detent on the opposite side of the track forming another point of support for said flexible barrier member.

8. A barrier for race-courses comprising a flexible barrier member having two points of support on one side of the track, one of said points being movable toward and from the other, a resilient counter connection for the movable point of support, normally operative to extend said barrier member in line with the track, a detent on the opposite side of the track forming another point of support for said flexible barrier member, and means whereby the barrier may be moved along the track while in engagement with said detent member.

9. A barrier for race-courses comprising an endless elastic cord, two pulleys on one side of the track mounted on carriages, and around which pulleys said flexible cord passes, said carriages movable on suitable guides lengthwise of the track, a detent on the opposite side of the track and movable lengthwise thereof, said detent engageable by said elastic cord, means for moving the first two pulleys from each other to straighten said cord when released from the detent, and means for moving the detent and the opposed barrier support lengthwise of the track.

10. A barrier for race-courses comprising an endless elastic cord, two pulleys on one side of the track mounted on carriages, and around which pulleys said flexible cord passes, said carriages movable on suitable guides lengthwise of the track, a detent on the opposite side of the track and movable lengthwise thereof, said detent engageable by said elastic cord, means for moving the first two pulleys from each other to straighten said cord when released from the detent, and means for moving the detent and the opposed barrier support lengthwise of the track, said last named means including a drum having suitable connections with the detent and with the opposed carriage on the opposite side of the track, and a governing device for controlling the unwinding of the drum.

11. A barrier for race-courses comprising an endless elastic cord, two pulleys on one side of the track mounted on carriages, and around which pulleys said flexible cord passes, said carriages movable on suitable guides lengthwise of the track, a detent on the opposite side of the track and movable lengthwise thereof, said detent engageable by said elastic cord, means for moving the first two pulleys from each other to straighten said cord when released from the detent, and means for moving the detent and the opposed barrier support lengthwise of the track, said detent having an electrically operated releasing mechanism.

12. A barrier for race-courses comprising an elastic endless cord, two pulleys around which said elastic barrier passes, a carriage for each pulley, a track on which said carriages may travel lengthwise of the race-course, and towards and from each other, anchorage means for one of the pulleys and an elastic connection for the other pulley, operative to stretch the cord taut along that side of the fence, and a releasable detent on the opposite side of the race-course, with which said elastic barrier is engageable.

13. A barrier for race-courses comprising an elastic endless cord, two pulleys around which said elastic barrier passes, a carriage for each pulley, a track on which said carriages may travel lengthwise of the race-course, and towards and from each other, anchorage means for one of the pulleys and an elastic connection for the other pulley, operative to stretch the cord taut along that side of the fence, a releasable detent on the opposite side of the race-course, with which said elastic barrier is engageable, said detent mounted on a carriage movable on a track lengthwise of the course, and means for moving the barrier backwards and forwards along the course.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALBERT F. DAYTON.

Witnesses:
C. A. PENFIELD,
S. H. NOURSE.