(No Model.)

E. FORBES.

APPARATUS FOR STARTING RACERS.

No. 481,260. Patented Aug. 23, 1892.

Fig. 1.

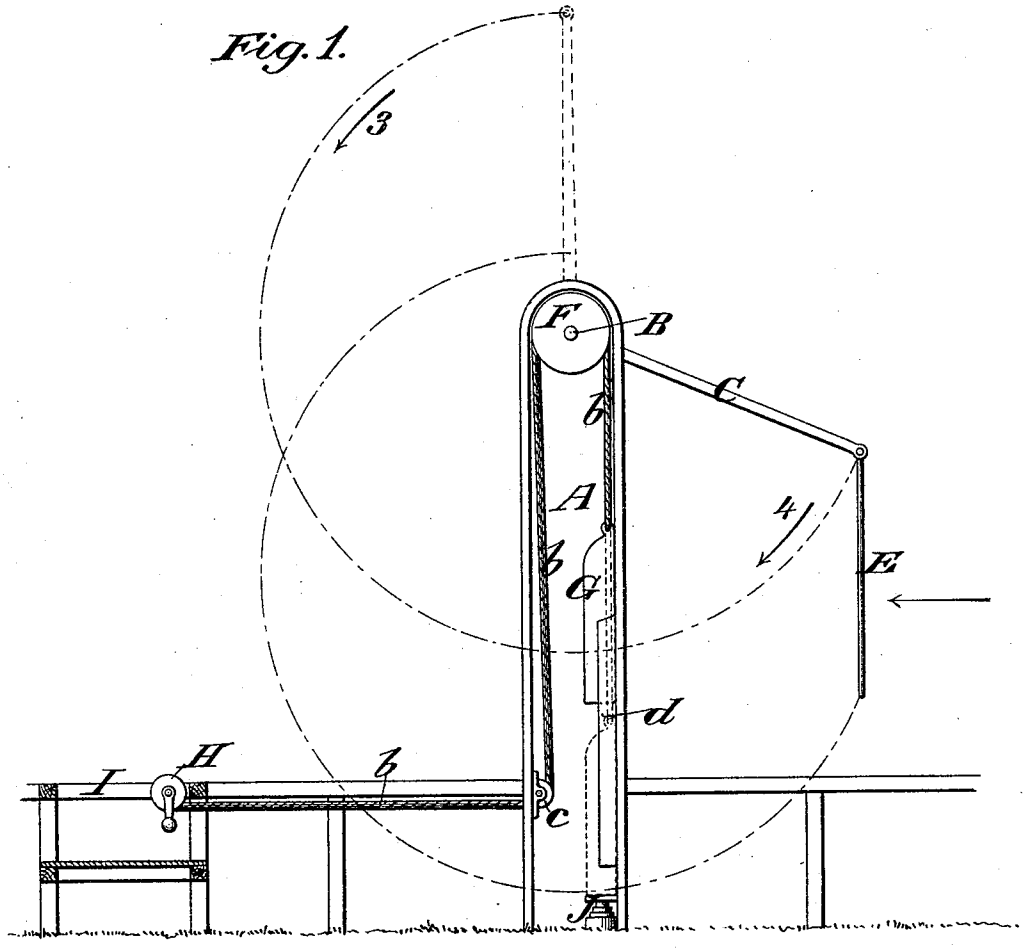
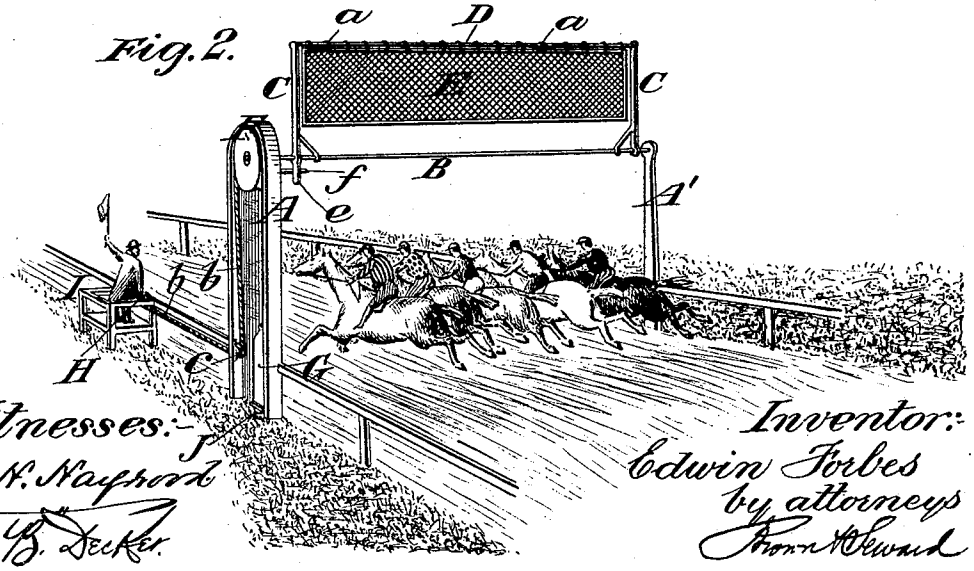


Fig. 2.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR STARTING RACERS.

SPECIFICATION forming part of Letters Patent No. 481,260, dated August 23, 1892.

Application filed December 30, 1891. Serial No. 416,514. (No model.)

To all whom it may concern:

Be it known that I, EDWIN FORBES, of Flatbush, in the county of Queens and State of New York, have invented a new and useful Improvement in Apparatus for Starting Racers, of which the following is a specification, reference being had to the accompanying drawings.

This invention consists in a light fence, gate, or screen suspended from a swinging carrier, which is so operated and controlled in part by an automatic lifting device and in part by the starter that on the horses or other racers moving slowly toward it side by side it may be kept slowly moving in the same direction by the said lifting device under the control of the starter until the said racers are all in perfect alignment and then left under the control of said lifting device, to be thereby suddenly lifted clear out of the way.

Figure 1 represents a side view of the apparatus, partly in section, showing the fence, gate, or screen in position to commence bringing the racers into alignment. Fig. 2 is a perspective view of a portion of the race-course, showing the apparatus in the position it assumes when liberated after the racers have been brought into alignment.

Similar letters of reference designate corresponding parts in all the figures.

A A′ are two standards arranged opposite each other, one on each side of the track of the race-course at or near the line whence the start is desired to be made.

B C C D designate the swinging carrier, consisting of a horizontal shaft B, two parallel arms C C, secured on said shaft near the ends thereof, and a pivot or rod D, secured between the said arms. The shaft B is fitted to turn in bearings in the upper parts of the standards A A′ at such a height that the racers may pass freely under the said shaft when the way between the standards is otherwise unobstructed.

E is the fence, gate, or screen, hereinafter termed "gate," consisting of a light frame, upon which is stretched any suitable light fabric, preferably light wire-netting. This gate is suspended at its upper edge by loops or hangers *a* from the rod D of the carrier, so that it will hang vertically from said rod in all positions which the carrier may assume in its swinging movement.

On one end of the shaft B there is secured a pulley F, over which passes a rope *b*, to one end of which, depending from one side of the pulley, is attached the automatic lifting device, which in the example represented is a weight G, though it is obvious that a spring connecting the end of the said rope at a suitable fixed point might be the equivalent of the weight. The other part of the rope depending from the other side of the pulley passes under a guide-pulley *c* and thence to a controlling apparatus, as a windlass H, on the starter's stand I, which is some distance forward of the standards A A′.

A stationary cushion or spring-buffer J is represented as applied under the weight G to take up the concussion produced by the fall of the weight. A guide *d* is represented in Fig. 1 as applied to guide the weight in its ascent and descent, and a stop *f*, which may consist of a steel spring, is represented in Fig. 2 on the post A to act in combination with a downward or rearward extension of one of the arms C of the carrier to steady the carrier and gate when they have been thrown up to the position shown in Fig. 2.

The operation of this apparatus is as follows: When at rest, the weight is on the cushion J and the arms of the carrier C are directed upward from the shaft F, as shown in Fig. 2 and in dotted outline in Fig. 1. At other times than during the starting of a race the weight G rests upon the cushion J, and the arms of the carrier are turned upward, as shown in Fig. 2 and in dotted outline in Fig. 1, so that the gate hangs suspended above the shaft, leaving the way clear under the shaft. When the start is to be made, the starter, by means of the windlass H or controlling device, winds up or draws in the rope *b*, raising the weight G and turning the carrier in the direction of the arrow 3 until the gate is brought to a position in rear of the standards A A′, as shown in bold outline in Fig. 1. The racers are then brought up to the gate as nearly as practicable in alignment with each other. The starter then slowly lets out the rope *b* and allows the weight to descend and turn the carrier in the direction of the arrow 4 un-

til the racers are all brought into exact alignment for starting, when the starter releases the controlling device or windlass H, and the weight G, falling suddenly, continues the movement of the carrier in the direction of the arrow 4, and in an imperceptibly small space of time throws the gate up to the elevated position above the shaft, leaving the way open.

It will be understood that this apparatus is applicable to starting horses for either running or trotting races, and, in fact, may be used for starting any racers whatever.

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

1. The combination, in an apparatus for starting races, of a swinging carrier and standards containing bearings therefor, a gate suspended from said carrier, an automatic lifting device applied to said carrier for lifting said gate, and a controlling device applied to said carrier for controlling the operation of the lifting device, substantially as herein set forth.

2. The combination of the posts or standards A, the swinging carrier consisting of the shaft B, arms C C, and pivot D, the gate E, suspended from said pivot, the pulley F on said shaft, the cord or rope *b*, the weight G, and the windlass H, all substantially as herein set forth.

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