

No. 808,813.

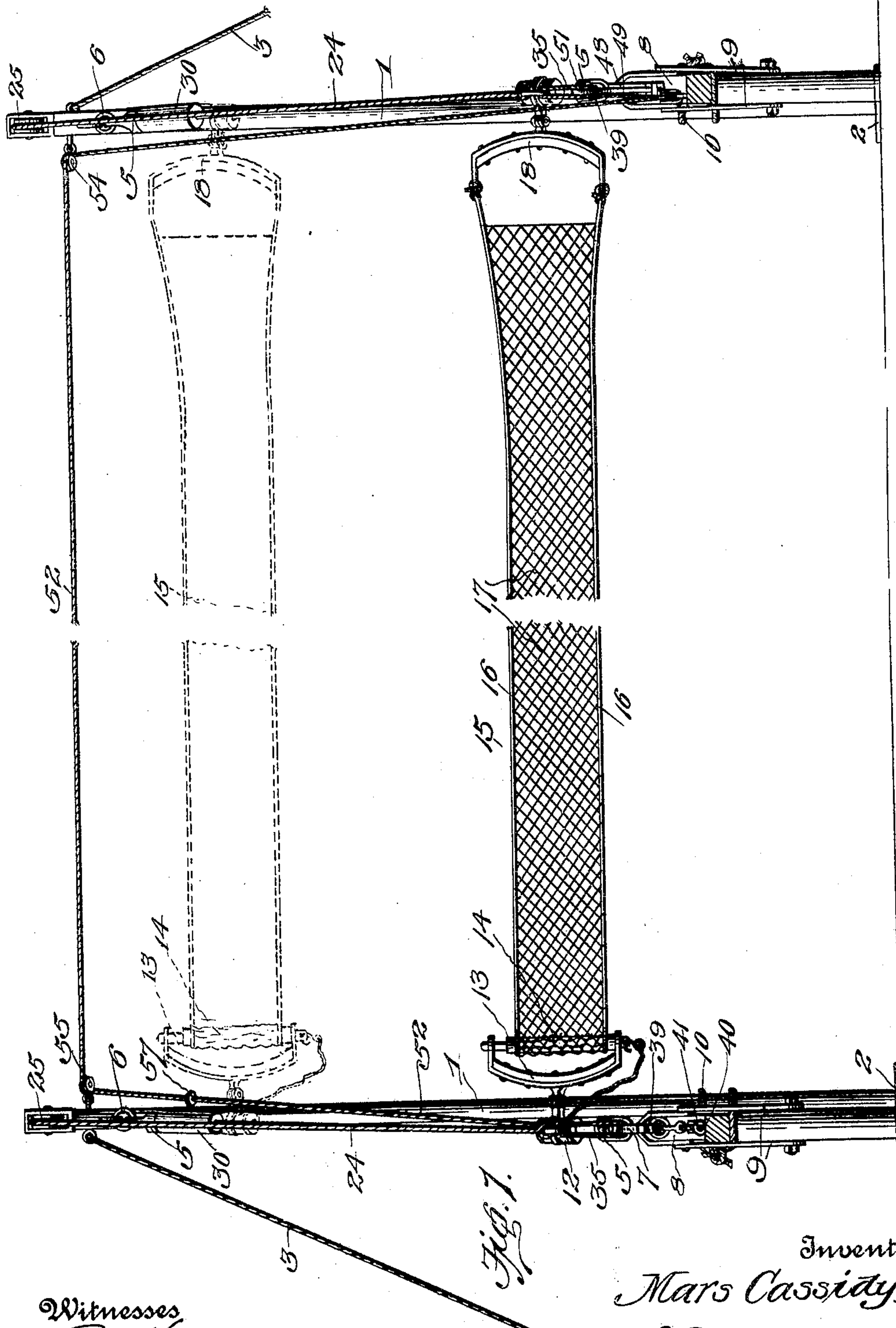
PATENTED JAN. 2, 1906.

M. CASSIDY.

PORTABLE STARTING GATE FOR RACE COURSES.

APPLICATION FILED FEB. 6, 1905. RENEWED DEC. 4, 1905.

3 SHEETS—SHEET 1.



Witnesses

C. E. Hunt
C. H. Griesbauer.

by

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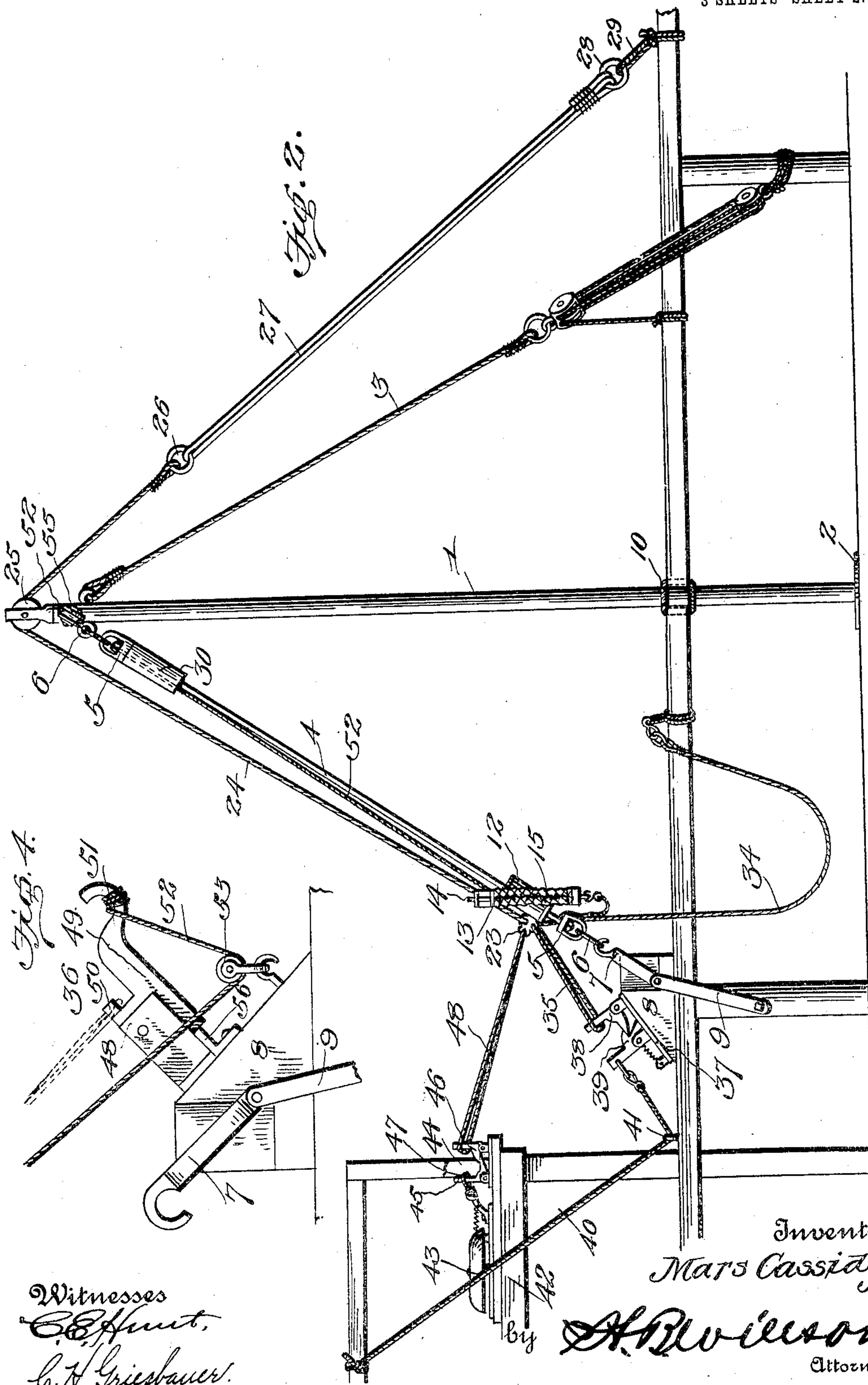
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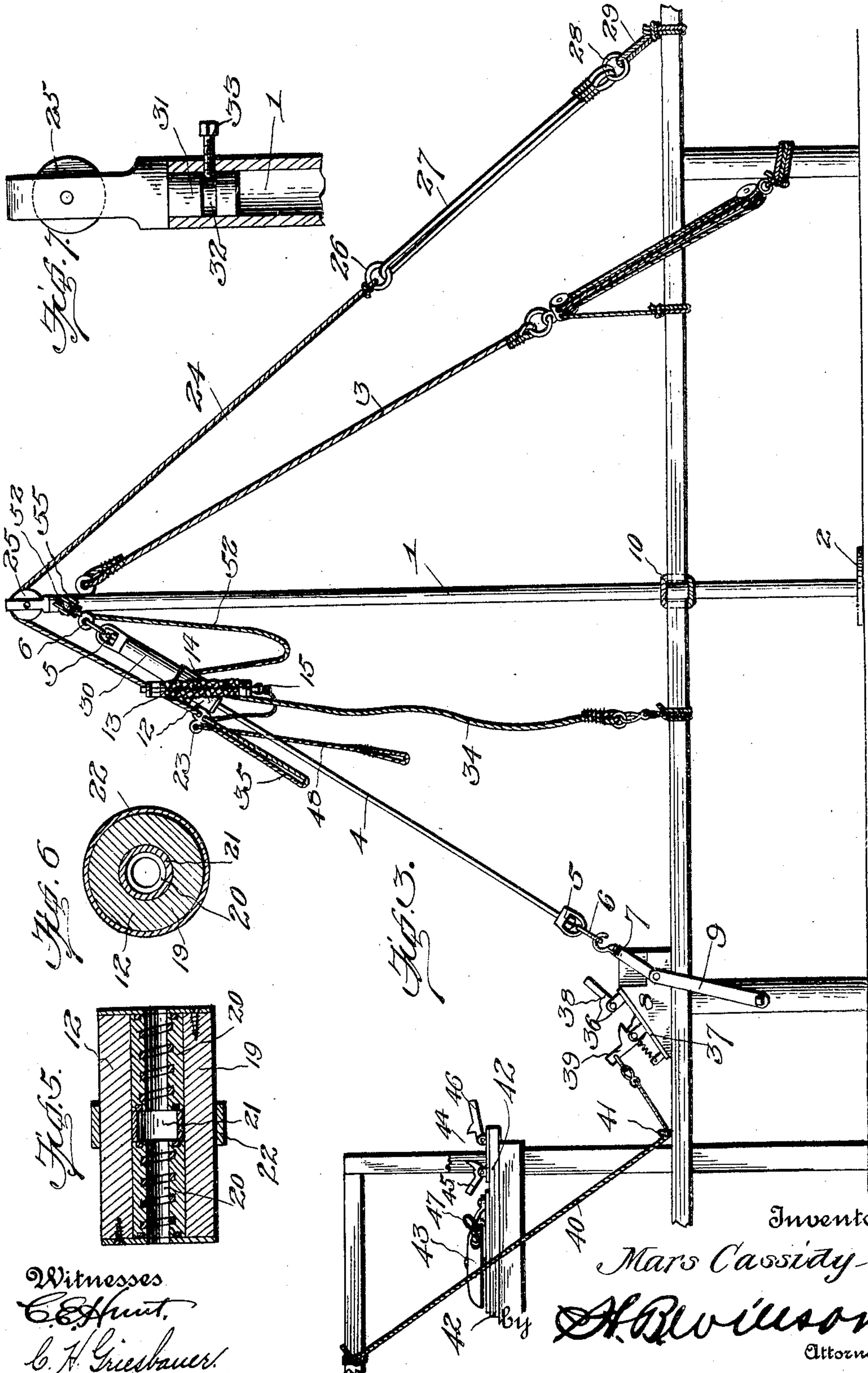
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

MARS CASSIDY, OF WASHINGTON, DISTRICT OF COLUMBIA.

PORTABLE STARTING-GATE FOR RACE-COURSES.

No. 808,813.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed February 6, 1905. Renewed December 4, 1905. Serial No. 290,203.

To all whom it may concern:

Be it known that I, MARS CASSIDY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Portable Starting-Gates for Race-Courses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in portable starting-gates for race-courses.

The object of the invention is to provide a gate of this character which will be quick and reliable in operation, simple, strong, and durable in construction, and exceedingly well adapted to the purpose for which it is designed.

Another object is to provide means whereby an alarm will be sounded by and simultaneously with the raising of the gate.

A further object is to provide a starting-gate which may be quickly taken down between the races, moved to and set up at different points along the track for various kinds of races.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of the gate, showing the same in lowered position in full lines and in raised position in dotted lines. Fig. 2 is a vertical sectional view looking toward the supports on the operating or left-hand side of the gate and showing the latter in lowered position. Fig. 3 is a similar view showing the parts in released position and the gate raised. Fig. 4 is a detail view of the gate-holding catch and the parts attached thereto as used on the side opposite to that shown in Figs. 2 and 3. Fig. 5 is an enlarged longitudinal sectional view through the slidably-mounted gate-carrying sleeve. Fig. 6 is a cross-sectional view of the same. Fig. 7 is a detail sectional view through the upper end of one of the gate-supporting standards, showing the swiveled connection of the guide-roller with the upper end of the standard.

Referring more particularly to the drawings, 1 denotes a pair of supporting-standards which are arranged on opposite sides of a race-track. Said standards are provided at their lower ends with base-plates 2 and supported and braced by adjustable guy-ropes 3 and in-

clined gate-supporting rods 4, said rods being formed of bronze, and on the ends of the same are arranged nuts by which coupling-loops 5 are secured to the rods. In the coupling-loops 5 are arranged rings 6. The rings 6 at the upper end of the rod are connected with an eye secured to the standard 1, while the rings 6 at the lower end of said rod are detachably engaged with a hook 7, which is secured to a block 8. This block is connected to the posts of the race-track fence by means of straps or braces 9, as shown. The standards 1 are further secured by being bound to the rails of the race-track fence, as shown at 10.

Suitably mounted upon the rods 4 are cylindrical gate-carrying blocks 12, to one of which is hingedly connected a yoke or bail 13. In the apertured ends of this yoke or bail 13 is removably secured a gate-holding rod or bar 14, to which is connected and on which is adapted to be wound one end of a starting-gate 15, which preferably consists of upper and lower stretches of double cord or rope 16, between which is arranged a netting 17, preferably formed of twine or similar flexible material. The opposite ends of the cords or ropes 16 are secured to the opposite apertured ends of a yoke or bail 18, which is hingedly connected to the sliding gate-carrying block 12 at this side of the track.

The block 12 preferably consists of a cylindrical body portion 19, preferably formed of hard wood and in which is arranged a longitudinally-disposed cylindrical passage, in which are arranged graphite bearing-cylinders or sleeves 20. Said sleeves are spaced apart, and between the same is arranged a cylindrical band 21. On the ends of the block are secured apertured disks or plates by which said bearing cylinders or sleeves are held in place. The sleeves 20 are provided on their inner faces with a spirally-arranged groove or channel, in which is placed graphite or other lubricating material, and, if desired, the space between the sleeves and within the band 21 may be supplied with oil. When the blocks are in position for use, the supporting-rods 4 pass through sleeves 20 and band 21, thereby causing the blocks to slide smoothly and evenly on said rods. On the blocks 12, midway between their ends, are arranged collars 22, on which is formed one member of the hinge connections between the yokes 13 and 18 and said blocks 12. On the blocks 12 are also arranged eyes 23, with each of which is connected one end of an operating-rope 24, which passes over

a guide-pulley 25, arranged on the upper end of the standard 1. The opposite ends of the ropes 24 are provided with rings 26, by which the same are secured to elastic connections 27, 5 the opposite end of which is provided with a ring 28. Through said ring 28 is passed a rope 29, by which the same is removably secured to the rail of the race-track fence.

The elastic connection 27 may be formed of 10 any suitable material or may be in the form of a coil-spring. The connection here shown consists of specially-prepared rubber tubing cut in a suitable length and passed through the ring 26 and doubled upon itself, the lower 15 free ends of the same being secured to the ring 28, as shown, so that when the blocks and the gate carried thereby are drawn down to an operative position the elastic connection 27 will be stretched upwardly, as shown in Fig. 2 of 20 the drawings, whereby when the blocks 12 are released the gate will be instantaneously jerked to its raised position and held until again pulled down. In order that the concussion of the blocks 12 may be relieved when the same 25 are jerked up, elastic bumpers 30 are provided, said bumpers being arranged on the upper ends of the rods 4 adjacent to and in engagement with the connecting-loops 5 on the upper end of the same. The frames or bearings 30 of the pulleys 25 are each provided with a downwardly-projecting cylindrical tenon 31, in which is formed an annular groove 32. The tenon 31 is adapted to project downwardly 35 into the upper end of the standards 1 and to turn freely therein. A set-screw 33 is arranged in the upper end of the standards 1, the end of said screw being engaged with the annular groove 32, thereby preventing the casual withdrawal of the tenon 31 from said 40 standards.

To the blocks 12 are connected the upper ends of ropes 34, by which the same and the gate may be pulled down to an operative position, the lower ends of the ropes 34 being 45 detachably connected to the rail of the race-track fence, as shown. Connected to one of the eyes 23 of the block 12 is a flexible securing-loop 35, which is preferably formed of cord or rope and is adapted to be engaged with 50 a suitable latch mechanism arranged on the blocks 8, whereby when the latch mechanism is released the loop will be automatically disengaged therefrom, thereby permitting the gate to rise.

55 The latch mechanism employed on the left-hand side of the track (shown in Figs. 2 and 3 of the drawings) consists of a plate 37, on which are arranged apertured bearing-lugs. In one pair of said lugs is pivotally mounted 60 a releasing-dog 38, which is adapted to be engaged with a spring-projected latch 39, to which is connected a releasing-cord 40, said cord passing through a screw-eye 41, arranged on the track-fence rail, and from thence upwardly to within reach of the starter occupy-

ing the starting stand or platform 42, whereby when the cord 40 is pulled the latch 39 will be actuated to disengage the dog 38, thereby releasing the loop 35 and permitting the gate to be raised. 70

In order that the gong 43 on the starter's stand 42 may be simultaneously sounded with the raising of the gate, a latch mechanism 44 is provided. Said mechanism consists of a 75 pivotally-mounted dog 45, which is adapted to be engaged with a pivoted latch 46. When said dog and latch are in engagement, the spring-retracted clapper of the gong is connected to the dog by means of a loop 47, while the latch 46 is connected to the sliding block 80 12 by means of a flexible loop 48, whereby when said block and gate are moved to their raised position the connection 48 will disengage the latch from the dog 45, which will cause the loop 47 on the clapper to be disengaged or released from said dog, thereby permitting the spring to forcibly engage the clapper with the gong, thus sounding the same 85 simultaneously and automatically with the raising of the gate. 90

The latch mechanism 36 on the opposite or right-hand side of the track is somewhat different from that on the left-hand side of the same and consists of bearing-plates 48, secured to the block 8 on this side of the device. Between said plates 48 is pivotally mounted a 95 forwardly or upwardly tilting hook-plate 49, on which is formed an upwardly-projecting lug 50, which is adapted to engage the holding-loop 35 of this side of the device when the gate is in a lowered position. The plate 49 is also provided with an upper rearwardly-projecting hook 51, with which is connected the end of a holding and releasing cord 52, 100 passing downwardly around a pulley 53 and from thence upwardly above the rod 4 and through a pulley 54 on the adjacent supporting-standard 1 and from said pulley 54 across the track over the gate 15, thence through a pulley 55, arranged on the upper end of the 105 opposite supporting-standard, and is connected at this end to the sliding gate-supporting block 12, whereby when said block is drawn downwardly the cord 52 will be stretched taut, thereby pulling upon the hook 51 and holding 115 the plate 49 and the lug 50 in an upright or operative position to receive the loop 35. A stop 56 is arranged in rear of the plate 48 and is adapted to be engaged by the plate 49 to prevent its being drawn too far back by the cord 52. By this arrangement as soon as the 120 least slack is given to the rope 52 by the slightest upward movement of the block 12 on the left-hand side of the track the plate 49 will be tipped or rocked forwardly, thereby 125 allowing the loop 35 to slip off the lug 50, thus releasing this side of the gate. A button or other suitable stop 57 is arranged on the cord or rope 52 to engage the pulley 55 when said cord is released by the upward 130

movement of the block 12, thus permitting no more slack in the rope 52 between the supporting-standards 1 than is necessary to release the hook-plate 49, thereby preventing this portion of the rope from sagging or interfering with the horses or other parts of the apparatus.

When the gates are to be set in operative position, the blocks 12 are drawn down by means of the ropes 34 until the loops 35 are in position to be engaged on one side with the latch 38 and on the opposite side with the lug 50 of the plate 49, said plate being held rigid by means of the cord 52, which is drawn taut by the lowering of the block 12, as hereinbefore described. The loop 48 is now engaged with the latch 44 of the gong-sounding mechanism. The releasing cord or rope 40 is then grasped by the starter or other person operating the device and at the proper time is pulled, thereby releasing the holding-ropes, permitting the elastic connection to project the gate upwardly and to permit the spring-retracted clapper to strike the gong, thereby sounding an alarm simultaneously with the raising of the gate.

An important feature of the gate is the ease and rapidity by which the same may be taken down and moved from one point to another along the track or course, thus enabling a single gate to be used for any form of race, the movement or shifting of the same being accomplished between the races without causing any unusual delay.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a mechanically-operated gate of the character described, the combination with suitably-braced portable, supporting-standards, of inclined guide-rods connected thereto, gate-carrying blocks slidably mounted on said rods, swiveled pulleys arranged in the upper ends of said standards, a rope passing over said pulleys and secured at one end to said blocks, an

elastic connection secured to the opposite end of said rope, gate-holding mechanisms to hold said gate down against the tension of said elastic connection, a gong having a spring-actuated clapper, a clapper-holding mechanism to hold said clapper in position to strike said gong, a flexible connection between said gate-carrying blocks and said clapper-holding mechanism whereby when the gate is released said clapper will be simultaneously released and caused to strike said gong, and a releasing-cord connected to said gate-holding mechanism, substantially as described.

2. In a mechanically-operated gate of the character described, the combination with suitably-braced, portable, supporting-standards, of inclined guide-rods connected thereto, gate-carrying blocks slidably mounted on said rods, swiveled pulleys arranged in the upper ends of said standards, a rope passing over said pulleys and secured at one end to said blocks, elastic-rubber tubing secured to the opposite end of said rope and connected to a fixed support, gate holding and releasing mechanisms arranged on each side of the track, the mechanism on one side comprising a pivoted releasing-dog to which said adjacent gate-carrying block is connected, and a pivoted spring-projected latch to hold said dog in operative position, a releasing-cord secured to said dog-holding latch, the holding and releasing mechanism on the opposite side of the track comprising a pivotally-mounted hook-plate, with which is adapted to be connected the gate-carrying block on this end of the gate, a cord to hold said hook-plate in operative position, said cord passing through pulleys to the gate-carrying block on the opposite end of the gate whereby when the latter is released the slackening of said cord will release said hook-plate and disengage the gate-carrying block at this end of the gate, substantially as described.

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

MARS CASSIDY.

Witnesses:

GEORGE W. LANGDON,
FRED. N. RIX.