

(No Model.)

B. E. HARRIS.
STARTING GATE.

No. 587,285.

Patented July 27, 1897.

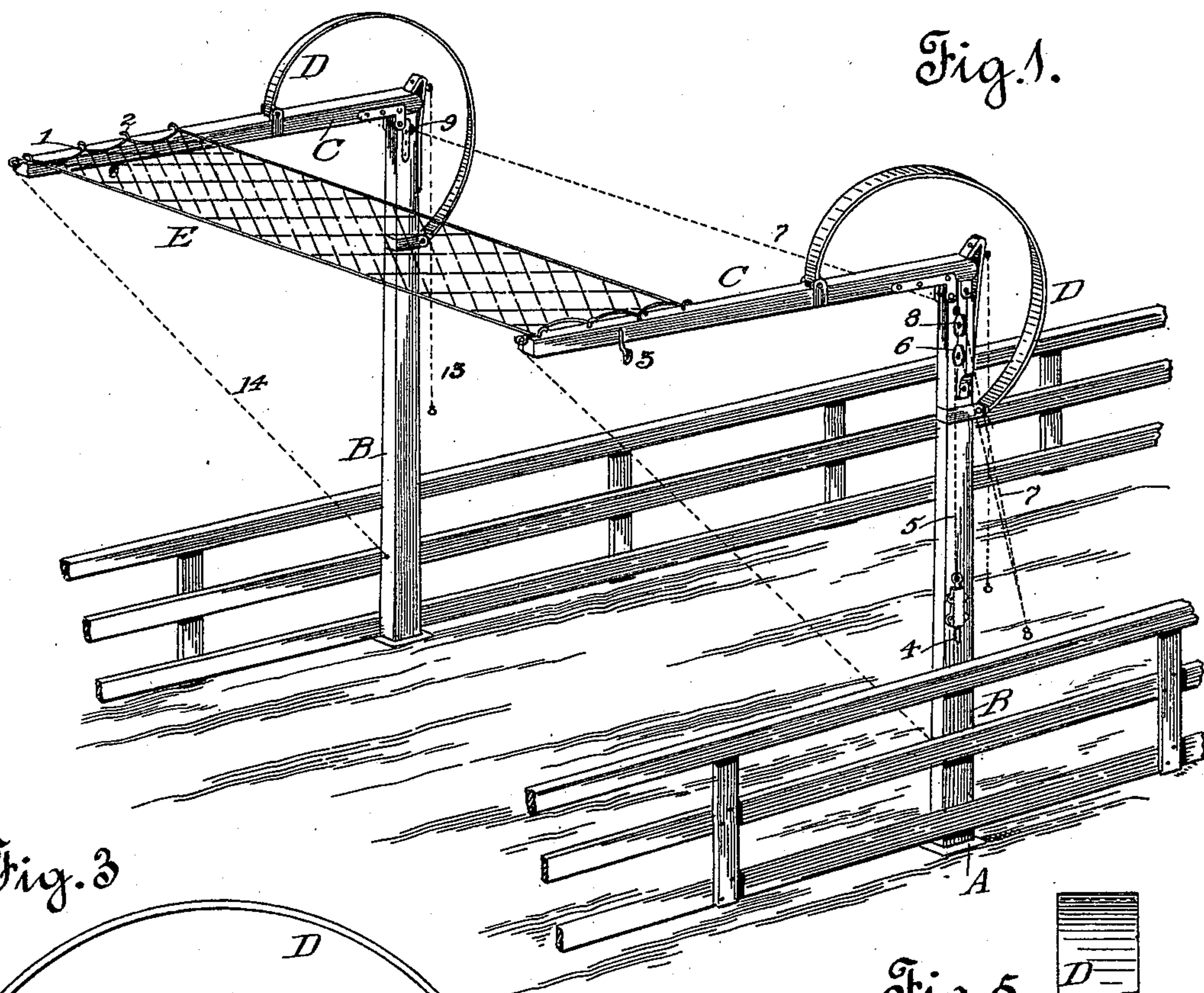


Fig. 1.

Fig. 3.

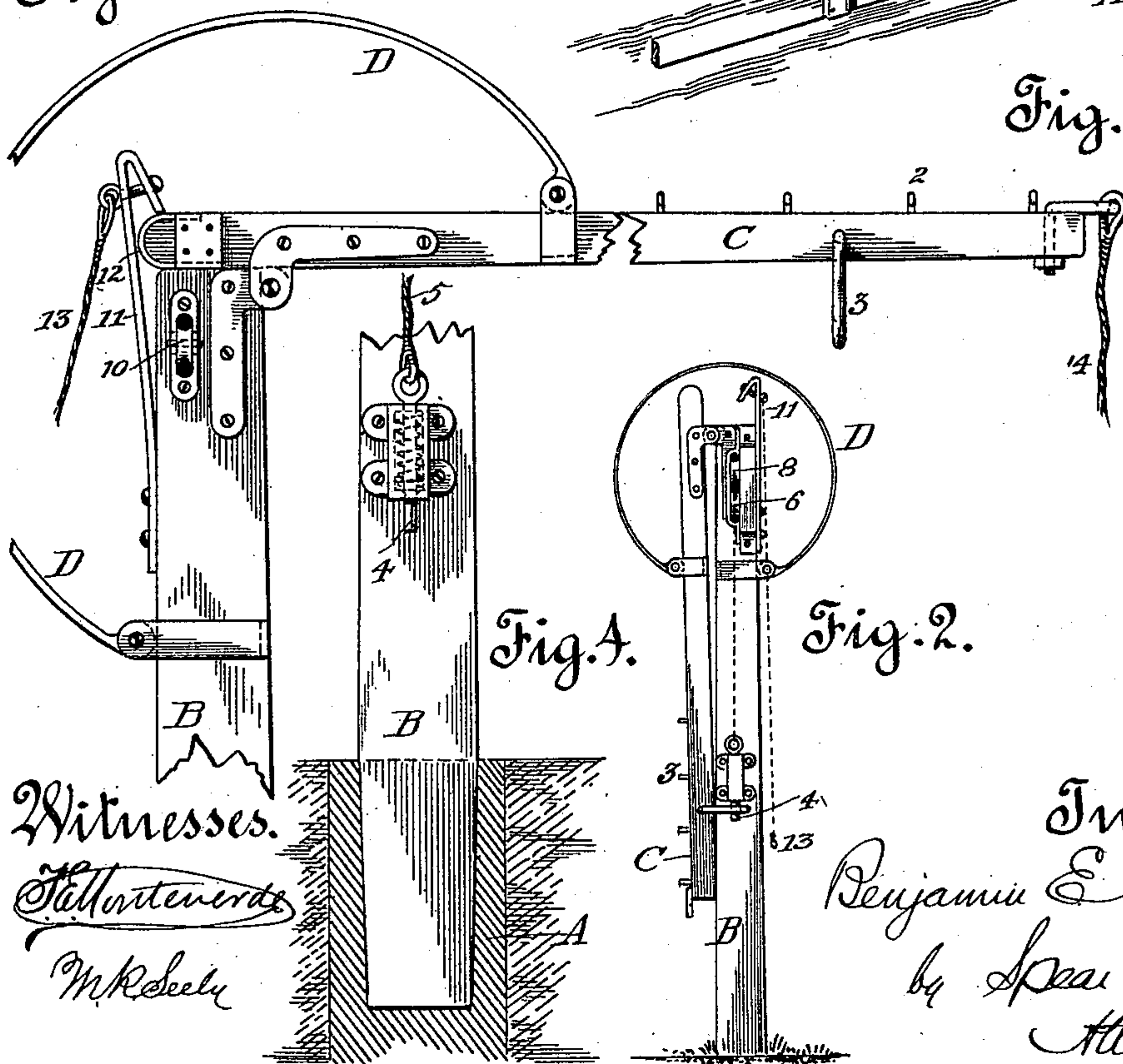


Fig. 5.

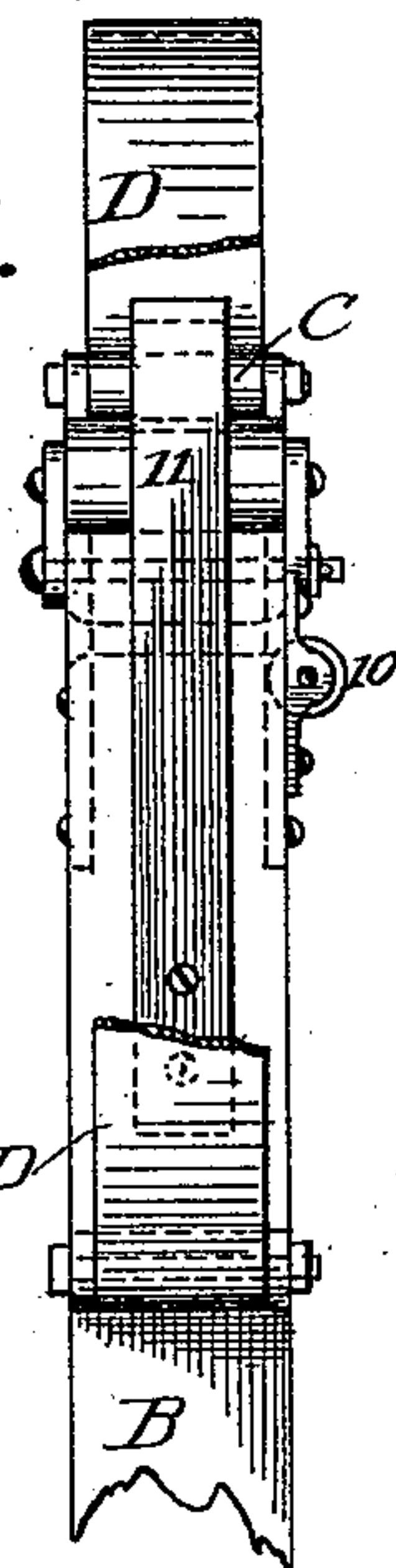
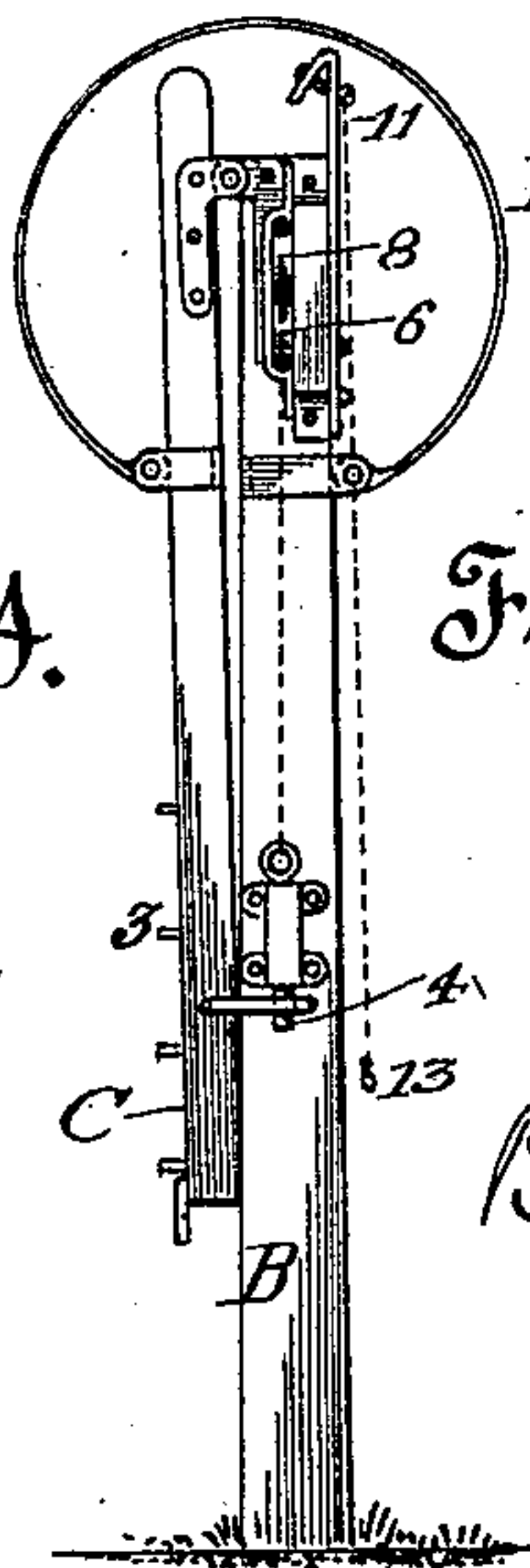


Fig. 4.

Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

BENJAMIN E. HARRIS, OF SAN FRANCISCO, CALIFORNIA.

STARTING-GATE.

SPECIFICATION forming part of Letters Patent No. 587,285, dated July 27, 1897.

Application filed April 2, 1896. Serial No. 585,933. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN E. HARRIS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Starting-Gates; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention is a starting gate or barrier for use upon race-tracks in order to give a fair start to the running or trotting horses participating in a race.

My object is to provide a simple and effective device for obstructing the track while the horses are being got into line and to provide means for suddenly removing it from in front of the horses and from the whole extent of the track without the possibility of interference with any of the horses, no matter whether they are near the sides or the middle of the track.

To be perfectly effective, the movement of such a barrier must be practically instantaneous, because after the horses are in line the start is made very quickly and suddenly. Hence barriers which are drawn sidewise across the track or gates meeting at the center and swinging out toward the sides are not practical starting devices. The riders of horses near the edges of the track are liable to be at a disadvantage on the start, and are, moreover, afraid of any barrier which can possibly be in their way when the start is made, and of course with any laterally swinging or moving barrier such a possibility must always exist.

Another object of my invention is to provide a portable starting-gate, in order that a single structure may be used at all the different starting-points for the various distances over which races are run. I thereby save the expense required in providing a number of starting structures and also improve the appearance of the track and avoid possible obstructions to or interference with the horses caused by the presence of a number of permanent structures, all but one of which are idle during any given race.

My apparatus consists of posts provided with hinged arms, the latter supporting the barrier. These arms are adapted to be locked to the posts by a detachable connection. A

strong spring is connected to each arm, so that when unlocked the arms will be thrown suddenly forward and upward away from and above all the horses, no matter if they are in line entirely across the track.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the gate on the track in elevated position. Fig. 2 is a side elevation of one upright with the arm which supports the barrier locked to it. Fig. 3 is an enlarged side elevation of the upright with the arm thrown upward. Fig. 4 is a side elevation of the lower part of the upright and should be read in connection with Fig. 3. Fig. 5 is a rear elevation of one of the uprights.

At any starting-point on the track I bury sockets A A, placed opposite each other and adapted to receive and support the uprights B B. The sockets and uprights are preferably tapered a little, so as to insure a firm support for the latter and yet permit them to be easily withdrawn. As many series of sockets may be thus placed as there are starting-points on the track, but it is only necessary to provide two uprights, since they can be easily moved from place to place.

At the top of each upright is hinged an arm C, which is capable of being held down against the upright or of being elevated so as to project in advance of the uprights and above the horses. Each arm is connected to its supporting-upright by a strong spring which tends to throw it upward into the position of Fig. 3. I prefer to use and have shown a curved flat spring D, hinged to the rear of the upright and the front of the bar, but any other spring situated so as to produce the same effect may be used instead—for instance, a compression-spring placed between the upright and the arm.

Across the ends of the arms C is stretched the barrier E, which is preferably composed of twine or other netting and which is rendered easily detachable from the arms by means of loops or rings 1 on the barrier and hooks 2 on the arms, or by other simple means. Both arms can be forced down and locked to the uprights by some easily-detachable connection, such as a hook 3 on the arm and a spring-bolt 4 on the upright. To this bolt is connected a cord or wire 5, which

passes up and over a pulley 6 and then extends down within reach of the hand. Joined to this cord is another cord 7, which is guided by a pulley 8 through a hole in one post, and
 5 thence extends across the track through a hole 9 in the opposite upright, over a guide-pulley 10, and thence down to the spring-bolt on the opposite post, Figs. 3 and 4. The starter, standing by the upright in the foreground of Fig. 1, can pull simultaneously upon both cords 5 and 7 and release both arms, which fly forward and upward on the arc of a circle away from and above the horses, which pass under the barrier. The
 15 motion is so quick as to be practically instantaneous, and the whole track is left free and unobstructed on the instant of starting.

I prefer to hinge the arm, as shown in Fig. 2, to the forward edge of the top of the upright and to attach the hinge at a little distance from the end of the arm, so that when it is raised it will rest firmly upon the top of the upright, as shown, and so that the upright will also form a stop to check the arm
 25 and take considerable strain from the hinge. I also provide a spring-catch 11 near the top of each upright and at the rear, which automatically engages with the elevated arm, Fig. 3, and also forms a buffer to receive the
 30 impact of the arm when thrown. The end

of the arm is preferably rounded, as shown at 12, to render it easy to disengage it from the catch 11 by pulling on the cords 13 or 14.

What I claim is—

1. In a starting-gate and in combination, oppositely-placed uprights, arms hinged thereto and supporting a barrier, flat leaf-springs connecting the uprights and arms, means for locking each arm to its upright, and means for releasing both arms simultaneously, substantially as described. 35 40

2. In a starting-gate, the combination with oppositely-placed uprights, of arms hinged at the tops of said uprights, and supporting a barrier and bow-springs hinged to said arms, and said uprights, substantially as described. 45

3. In a starting-gate, the combination with an upright, of an arm hinged at the top of said upright, a spring for throwing said arm upward, and a yielding buffer near the top of the upright, secured to the upright, and adapted to meet the impact of the end of the said arm, substantially as described. 50

In testimony whereof I have affixed my signature, in presence of two witnesses, this 26th day of March, 1896. 55

BENJAMIN E. HARRIS.

Witnesses:

L. W. SEELY,
 M. R. SEELY.