

(No Model.)

P. A. FINIGAN.
STARTING GATE.

No. 601,014.

Patented Mar. 22, 1898.

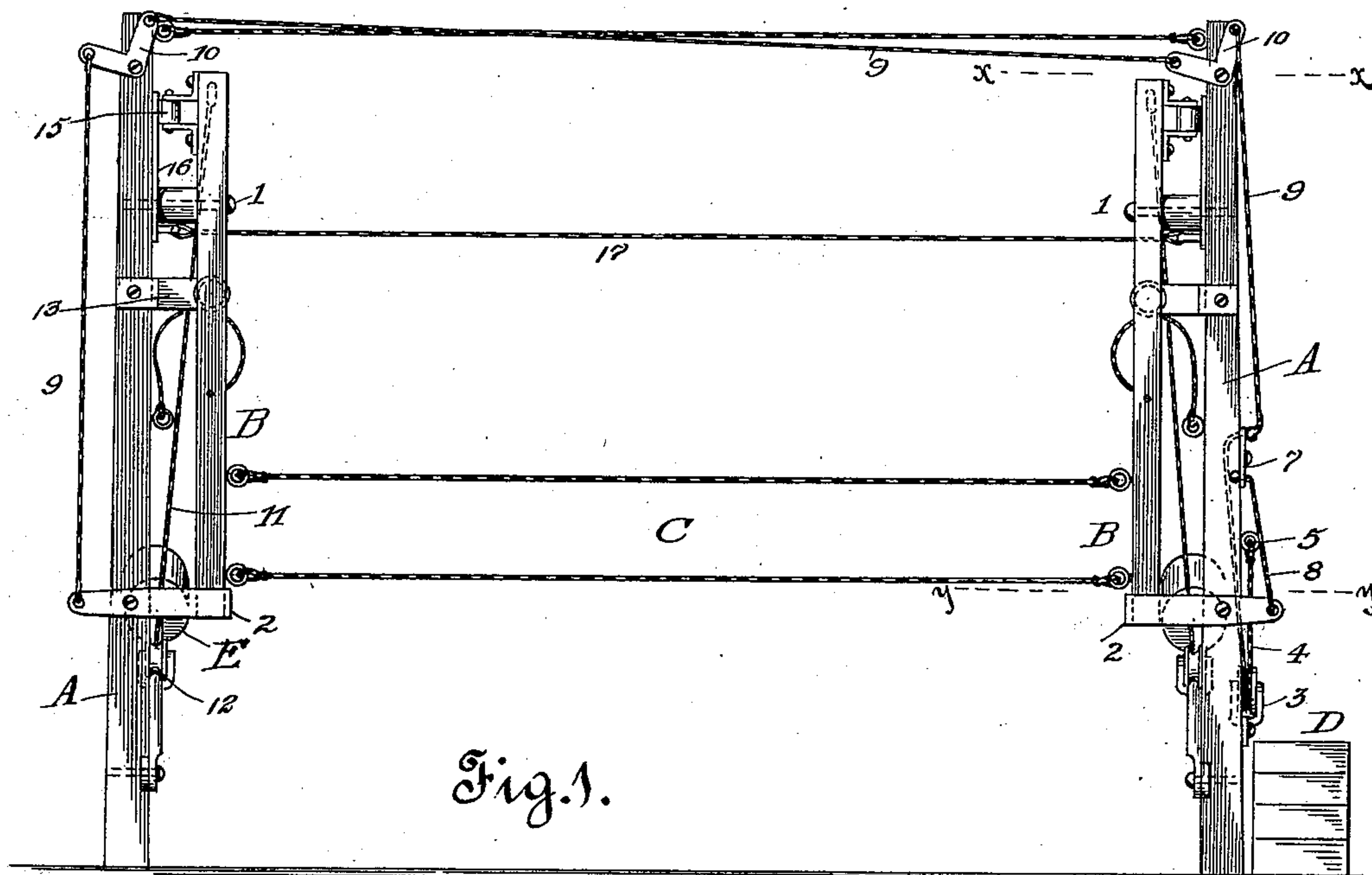


Fig. 1.

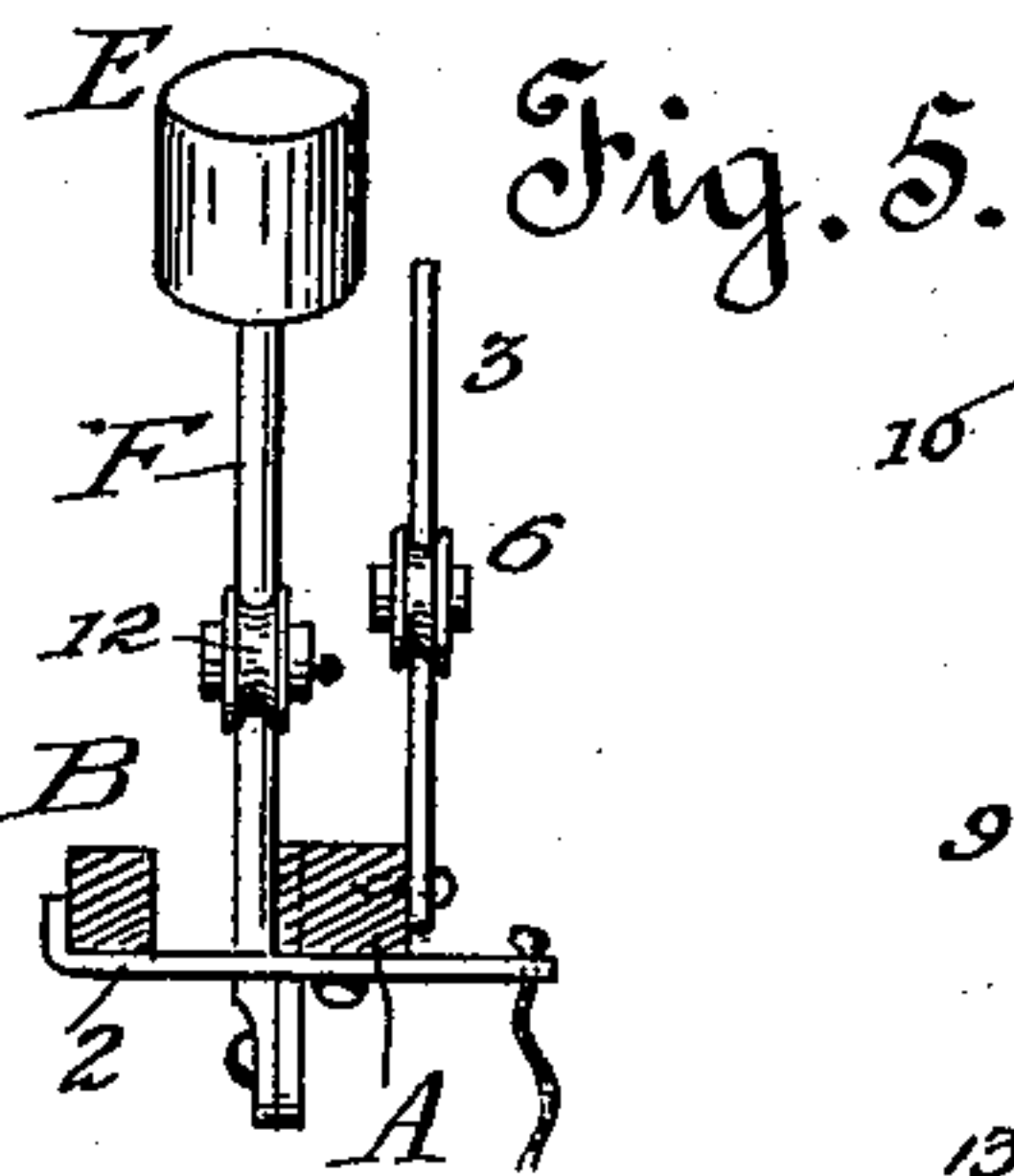


Fig. 5.

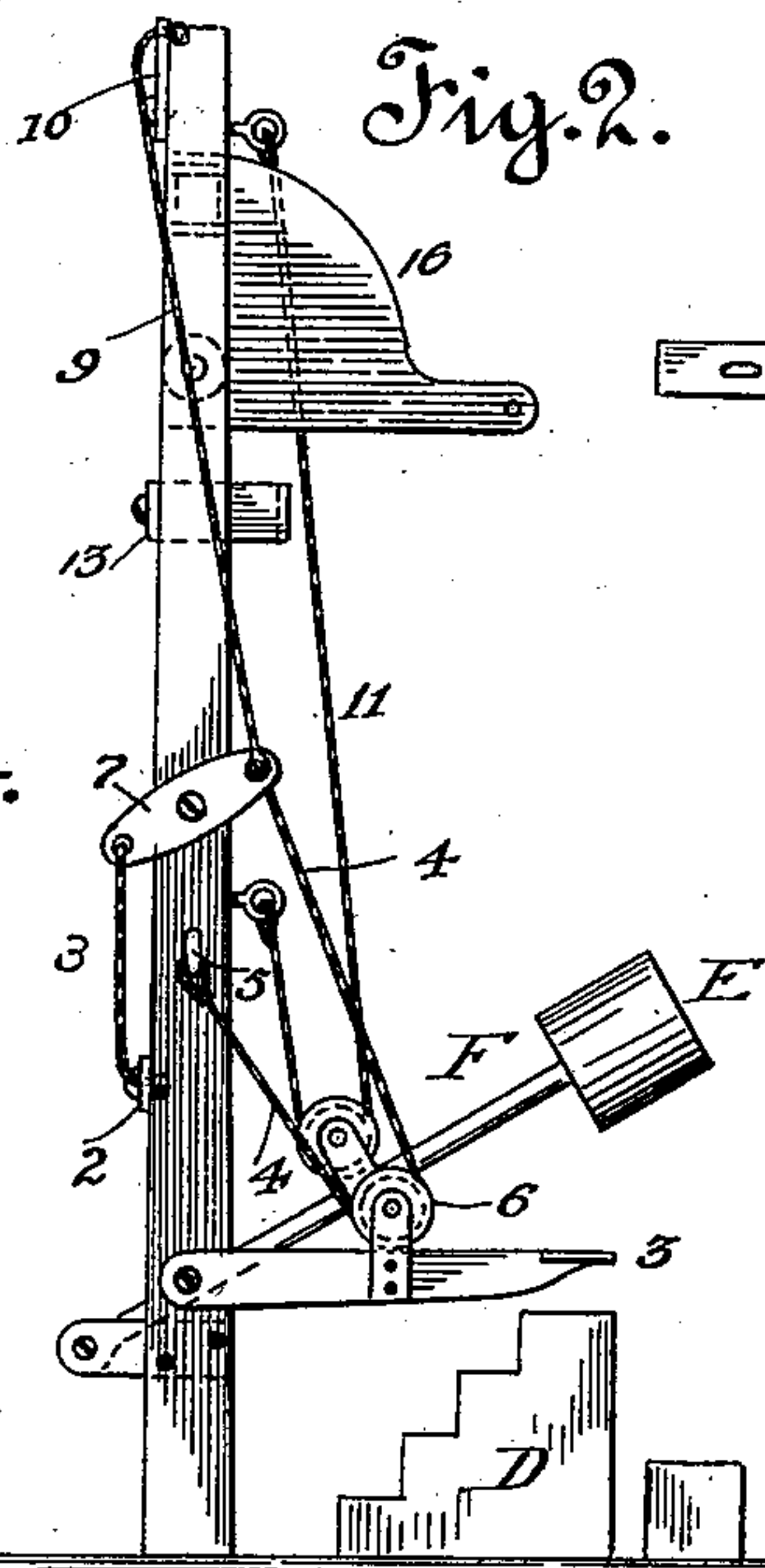


Fig. 2.

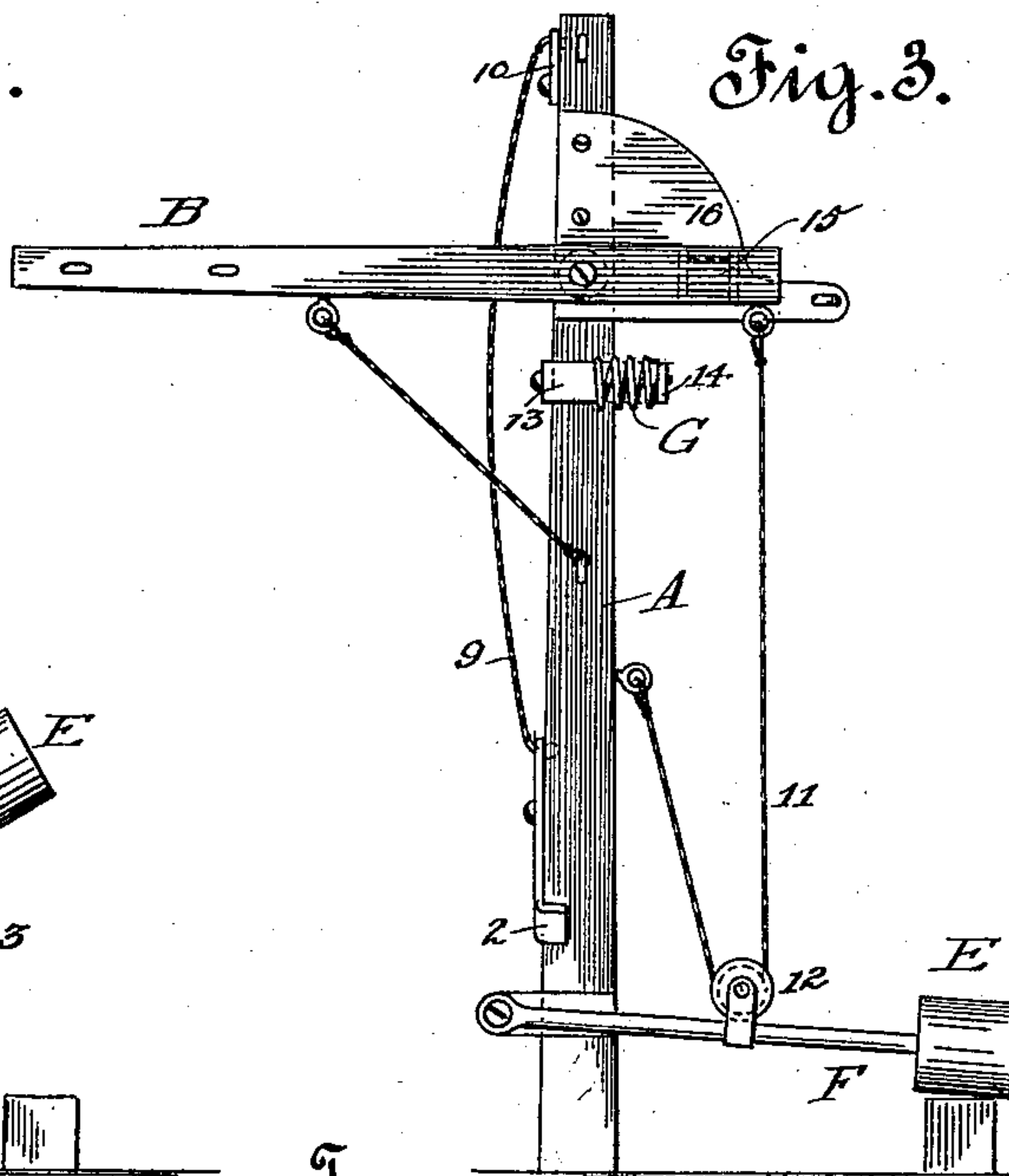


Fig. 3.

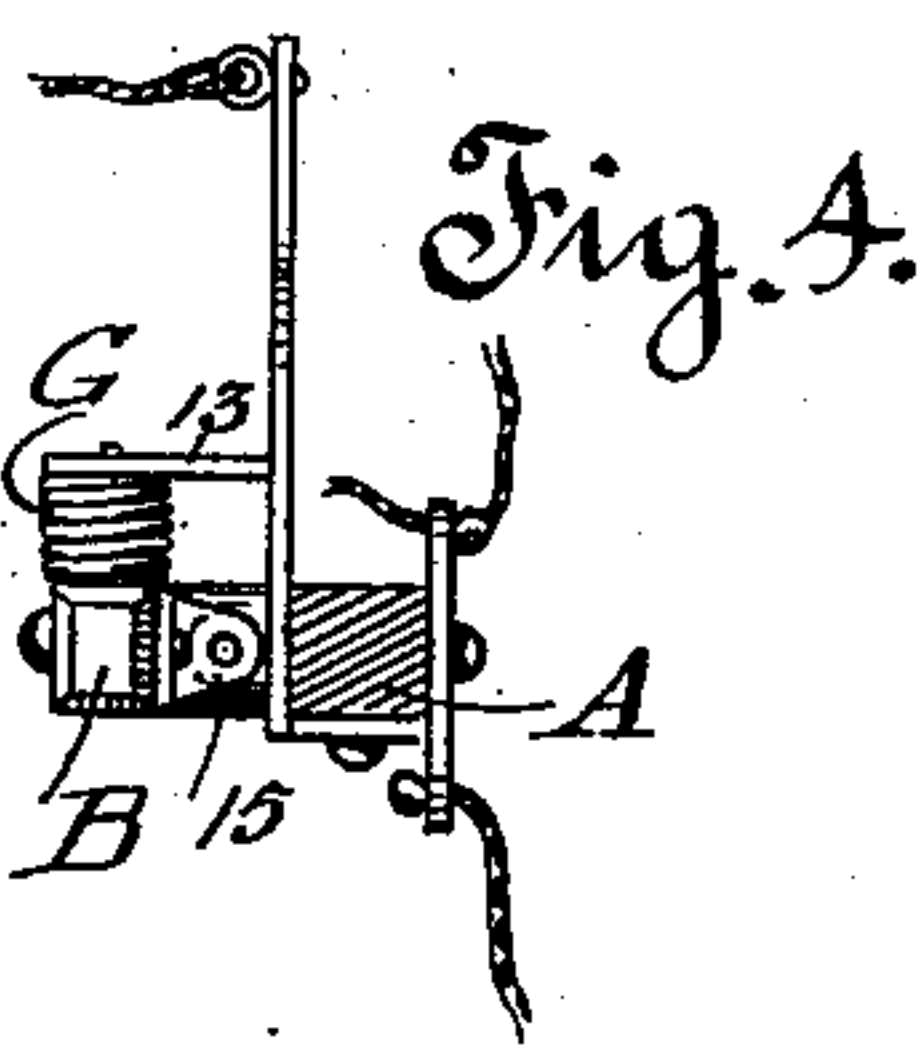


Fig. 4.

Witnesses.

H. H. Nutt

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UNITED STATES PATENT OFFICE.

PETER ANDREW FINIGAN, OF SAN FRANCISCO, CALIFORNIA.

STARTING-GATE.

SPECIFICATION forming part of Letters Patent No. 601,014, dated March 22, 1898.

Application filed April 14, 1896. Serial No. 587,510. (No model.)

To all whom it may concern:

Be it known that I, PETER ANDREW FINIGAN, a citizen of the United States, residing in the city and county of San Francisco, in the State of California, have invented a new and useful Starting-Gate, of which the following is a specification.

My invention relates to starting-gates or movable barriers used upon race-tracks to restrain the horses while they are being alined previously to starting the race and which are provided with means for suddenly removing them and clearing the course at the instant of the start.

The object of my invention is to furnish a simple and effective device for the purpose and particularly provide a less complicated, awkward, and unsightly supporting structure than is required for the gates now in use.

My apparatus consists generally of two posts, to which are connected swinging arms which support the barrier, the posts and arms being provided with means for locking such arms to the posts when the barrier is in position across the track, means for unlocking the arms, and means for throwing both arms simultaneously upward on the arc of a circle, so as to carry the barrier upward and forward away from the horses and to clear the whole width of the track.

My invention includes also various details of construction which need not be here specified, but which are fully hereinafter described, as well as shown in the accompanying drawings, in which—

Figure 1 is a front elevation of my starting-gate. Fig. 2 is an elevation from the starter's side with the barrier down across the track as in Fig. 1. Fig. 3 is an elevation with the barrier raised. Fig. 4 is a cross-section of one of the supporting-posts on the line X X of Fig. 1. Fig. 5 is a cross-section on the line y y of Fig. 1.

At any point on the track where a race is to be started I place two posts A A, one on each side of the track and opposite the other. To each post is pivoted an arm B, preferably by means of a pin 1 projecting inwardly from the post. The outer ends of the arms B B support a barrier C, which is shown as composed of two parallel ropes, but which may

be composed of twine-netting or any other suitable material. A latch 2 is pivoted to each post, which form locks for the arms, Fig. 1, when the latter are turned down to bring the barrier across the track in front of the horses. These two latches are moved simultaneously to allow the arms and barrier to fly upward by connection operated by the starter, who preferably stands upon a block D near one post, from which he can survey the field. A foot-lever 3 is pivoted to the post within convenient reach from the starter's block, which is preferably boxed in, so as to conceal it. In this way the jockeys are prevented from anticipating the instant of starting, as they might be able to do by watching the starter's hand, if that were used for releasing the latches. A rope 4 is connected to the foot-lever, which preferably extends from the post at 5, passing under a pulley 6 on the lever, and thence to a two-armed lever 7, pivoted upon the post. One arm of lever 7 is connected to the latch on that post by a rope 8. From the other arm of the lever another rope 9 extends to the top of the post across the track to the opposite post and to the latch on that side. This rope 9 might be guided by pulleys at the tops of the posts; but I have shown two bell-cranks 10 on the respective posts, to which the rope 9 is connected and which I consider a preferable means for transmitting the pull and for insuring the simultaneous movement of both latches.

When the starter's lever is pressed, both arms carry the barrier upward on the arc of a circle to the elevated position shown in Fig. 3. The means which I prefer to employ for producing this movement is a weight E, secured to the end of a lever F, pivoted to each post. A rope 11 extends from the post to the rear end of each arm, but passes on its way under a pulley 12 on the weighted lever. Hence when both latches are released at the same time both weights act and the two arms are swung upward simultaneously, carrying the barrier with them.

The initial impulse is given to each arm by a pressure-spring G, located on a bracket 13, each post and which is compressed by the act of lowering the barrier-arm down against the

sliding follower 14, Fig. 4. These springs act quickly, overcome the inertia of the weights, take up any possible slack in the ropes connected to such weights, and thus insure the rapid and steady motion of the arms and barrier.

The rear ends of the barrier-arms are provided with rollers 15, which bear upon guide-plates 16, secured to the posts A and projecting rearwardly. The lower edges of these plates are substantially in line with the pivoted connection of the barrier-arms and their rear ends are connected by a rope 17, which is kept taut and tends to pull the plates slightly toward one another. This puts a slight pressure upon the rollers 15 and the rear ends of the barrier-arms, causing their front ends to diverge slightly, so as to keep the barrier-ropes always tight and prevent sagging when the barrier-arms are elevated.

I do not limit myself to the particular means described for operating the barrier-arms nor for locking and releasing the same, as various devices equivalent in structure could be substituted for those shown, which would fall within the limits of my invention.

Having thus described my invention, I make the following claims:

1. In combination with the upright posts of a starting-gate, barrier-arms pivoted to said posts, inclined guide-plates secured to the posts, rollers on the barrier - arms bearing against said guide-plates, and means for operating said barrier-arms substantially as described.

2. In a starting-gate the combination with the upright posts, and the barrier-arms pivoted thereto and supporting a flexible barrier, of guide-plates secured to the posts and connected together, and rollers on the barrier-arms, and traveling on said guide - plates, whereby the barrier is put under tension when the arms are elevated substantially as described.

In witness whereof I have hereunto set my hand, in the city and county of San Francisco, State of California, this 9th day of April, A. D. 1896, in the presence of two witnesses.

PETER ANDREW FINIGAN.

Witnesses:

JNO. H. MILLER,

THOS. E. HAVEN.