No. 705,043. Patented July 22, 1902.

C. W. CROWLEY.

RACE STARTING MACHINE.

(Application filed July 22, 1901.)

(No Model.) 2 Sheets—Sheet I.

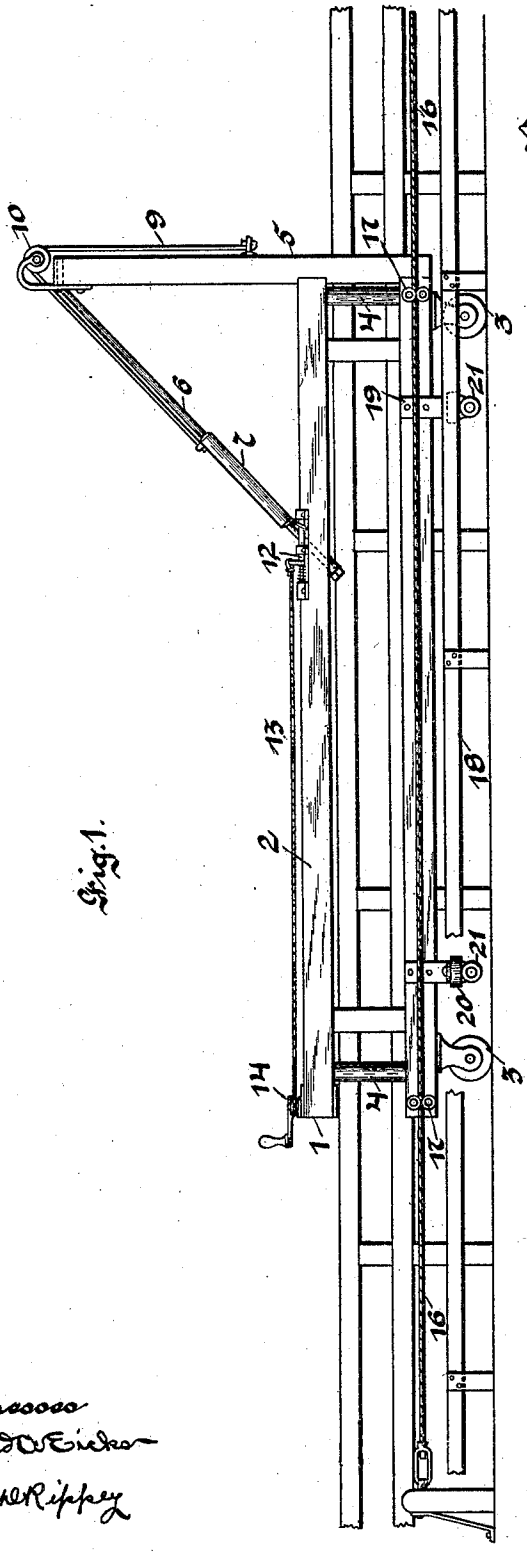


Fig. 1.

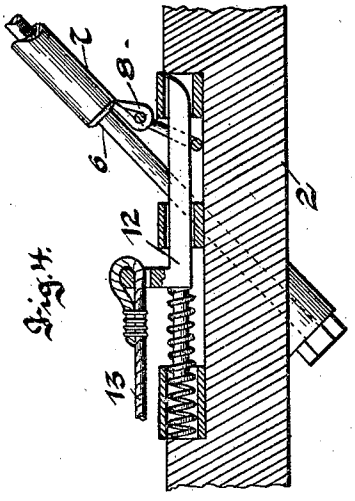


Fig. 4.

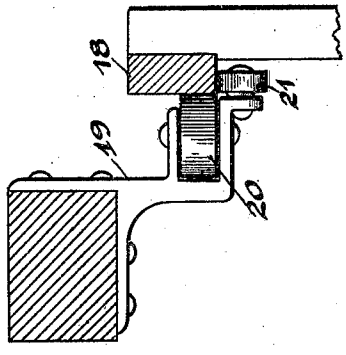


Fig. 3.

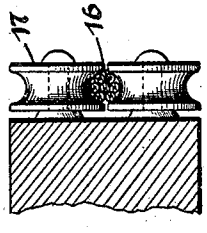


Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

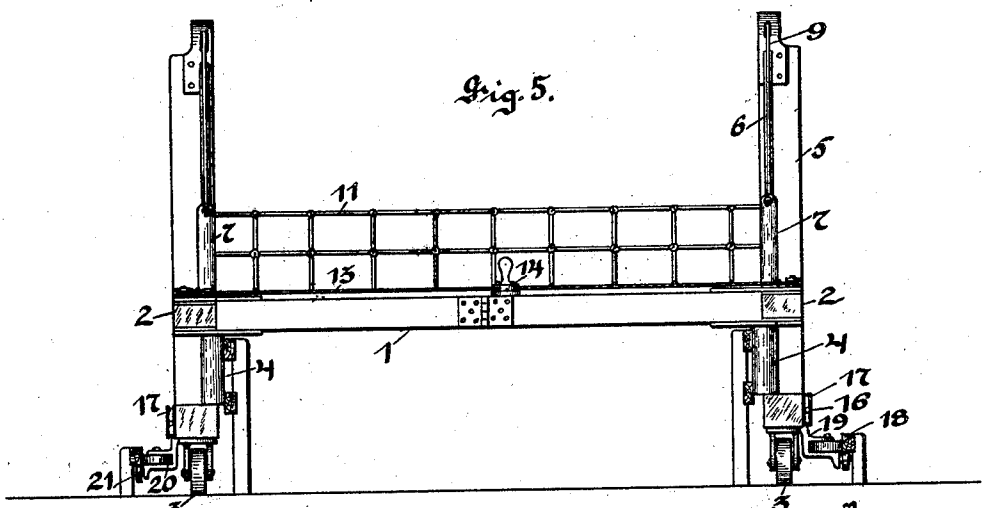
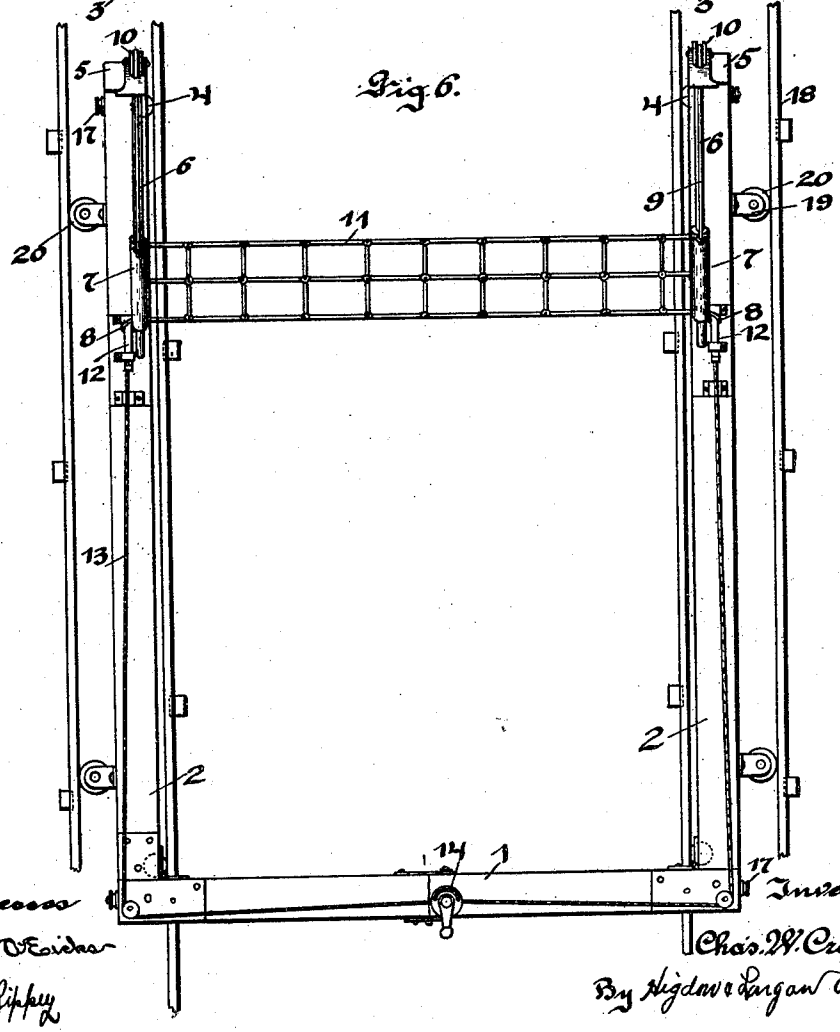


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES W. CROWLEY, OF ST. LOUIS, MISSOURI.

RACE-STARTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 705,043, dated July 22, 1902.

Application filed July 22, 1901. Serial No. 69,253. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. CROWLEY, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Race-Starting Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to race-starting machines; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

One object of this invention is to provide an improved starting-machine for race-horses adapted to extend entirely across the track and having its sides operating against the fences at the sides of the track, so that the machine will be properly guided and securely braced in the proper position.

Another object is to provide suitable means for holding the machine upon the ground when the barriers are released to permit the horses to pass out of the machine.

On the 30th day of October, 1900, Letters Patent of the United States, numbered 660,984, were issued to me for a new and improved starting-machine for race-horses, and it will be noted that the machine herein shown and described is in the nature of an improvement on the patent referred to.

Figure 1 is a side elevation of the machine. Fig. 2 is a detail view of two of the pulleys or sheaves which operate upon the guide wires or ropes at the sides of the machine. Fig. 3 is a view showing one of the guiding-brackets. Fig. 4 is a detail view of one of the locks whereby the front barrier is held in position. Fig. 5 is a view of the machine from the rear. Fig. 6 is a plan view.

My improved machine is constructed with a rear barrier 1, adapted to extend entirely across the track and over the side fences. The ends of the said barrier are connected to side frames 2, of any preferred construction, mounted upon suitable rollers or wheels 3. The said frames 2 are vertical and are adapted to be moved adjacent to the fences outside of which they are located. Each of the said frames 2 carries a number of rollers 4, which bear against the outer side of the fence, thereby reducing the friction and at the same time assisting in holding the machine in the proper position and guiding it as it is moved over the track. Vertical standards or posts 5 are carried by the forward ends of the frames 2, and said posts, together with the frames 2, support the inclined rods 6, upon which operate the sleeves 7, to the lower ends of which are attached the loops 8. Sections of elastic cord or springs 9 are connected to the upper ends of the sleeves 7 and to the standards or posts 5 and are passed over the pulleys 10, thereby serving to draw the sleeves 7 upward when the latter are released. An inclined barrier 11 of suitable form is supported by the sleeves 7 and will be drawn upward and forward when the said sleeves are released. The purpose of this is to arrange the front barrier so that when it is released it will be drawn away from the heads of the horses, so that they will not be frightened by the rapid movement of the barrier.

A spring-actuated slide 12 is supported by each of the side frames, and the said slides operate within suitable guides and are adapted to pass through the loops 8, thereby holding the sleeves 7 and the front barrier in position in opposition to the power of the elastic cords or springs 9. Suitable connections 13, having common operating devices 14, are made use of for simultaneously releasing the sleeves 7 by moving the slides 12.

16 indicates ropes or other suitable devices, which are supported adjacent to the frames 2 and are connected thereto by means of the pulleys 17, carried by the said frames, between which the ropes 16 operate. From this it will be seen that said ropes 16 steady the frames when the sleeves 7 are released and drawn upwardly by the springs or elastics 9. The said pulleys 17 operate freely along the ropes 16, offering no resistance to the forward movement of the machine.

The side frames being arranged as described may easily be moved along the fences at the sides of the track, the rollers 4 reducing the resistance to a minimum.

When the barrier at the front of the machine is released, the forward end of the machine would be vibrated were it not for the connections between the frames 2 and the ropes 16, which serve to steady and retain the machine in the required position upon the ground.

To assist in holding the machine in proper position and to guide the same properly, I provide a guide-strip 18 at each side of the machine and near the bottom thereof and secure to the bottom portion of the frame on each side a number of brackets 19, which extend outward toward the said strips 18. A roller 20 is carried by each of the brackets 19, and the said rollers operate against the inner sides of the strips 18, and thereby prevent the lower sides of the side frame from being pressed apart and assist in guiding the machine along the proper course. The rollers 20 are carried horizontally, and the lower ends of the brackets are extended under the strips 19 and carry the small rollers 21, which operate against the under edges of the strips 18, thereby preventing the machine from being shaken or vibrated when the front barrier is released. These devices will be found of practical assistance in guiding and holding the machine in proper position.

I claim—

1. A machine for starting race-horses, consisting of suitable frames mounted outside the fences at the sides of the track, an inclined front barrier, devices for steadying the frames when the barrier is released and guides outside the frames for holding them against the fences, substantially as specified.

2. In a machine for starting race-horses, having an inclined barrier, extending across the track, frames for supporting said barriers and operating outside the fences at the sides of the track, guides for holding the frames against the fences, suitable devices carried by said frames for operating against the fences to reduce the resistance, and means for moving the front barrier to permit the horses to pass out of the machine, substantially as specified.

3. A machine for starting race-horses, consisting of suitable barriers, side frames for supporting them, which frames are adapted to operate outside the fences at the sides of the track, rollers carried by said frames and operating against the frames, suitable guides mounted outside the said frames to hold them against the fences and connections between the said frames and the guides, substantially as specified.

4. A machine for starting race-horses, consisting of suitable barriers, side frames for supporting them, which frames are mounted outside the fences at the sides of the track, rollers carried by said frames and operating against the fences, and guide-strips outside the frames for holding them against the fences, rollers carried by the said frames and operating against the guide-strips, guide-ropes mounted outside the side frames, and connections between the said frames and the guide-ropes, whereby the machine will be steadied, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. CROWLEY.

Witnesses:

EDWARD E. LONGAN,

ALFRED A. EICKS.