No. 674,162. Patented May 14, 1901.

J. F. CARR.

HORSE BREAKER AND STARTING MACHINE.

(Application filed Jan. 14, 1901.)

(No Model.) 2 Sheets—Sheet 1.

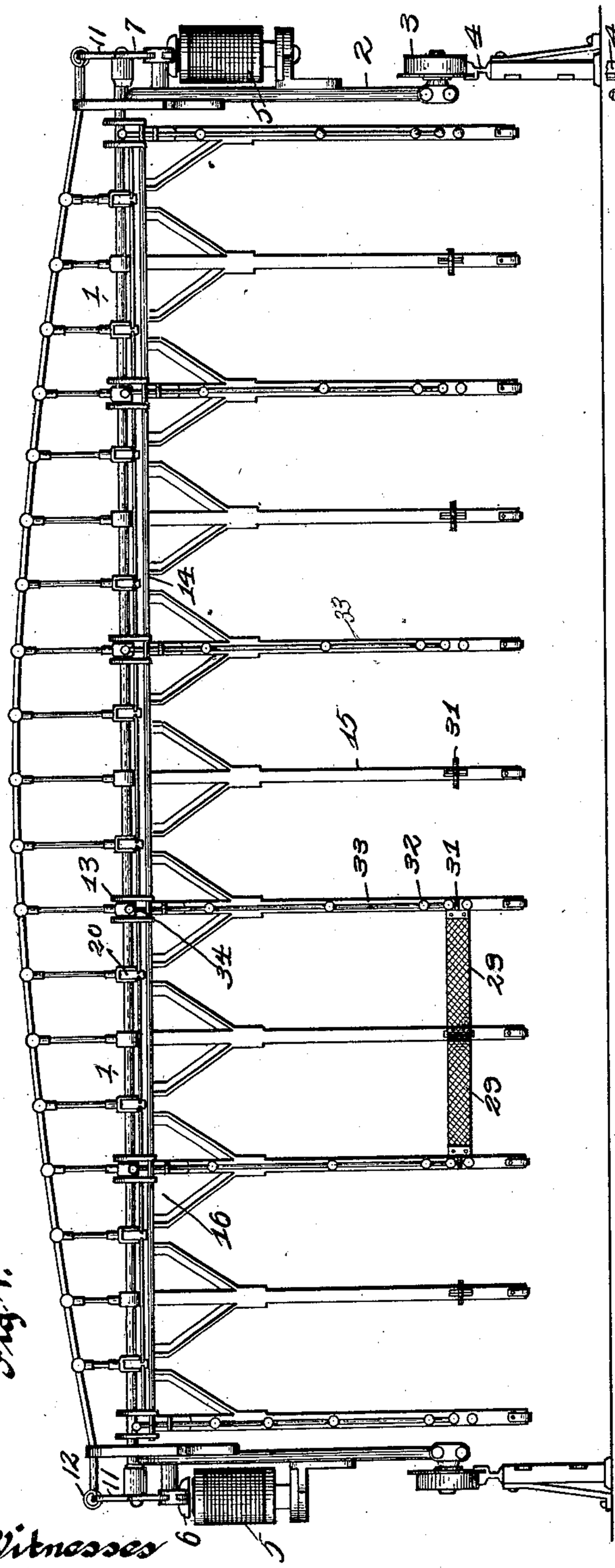

Fig. 1.

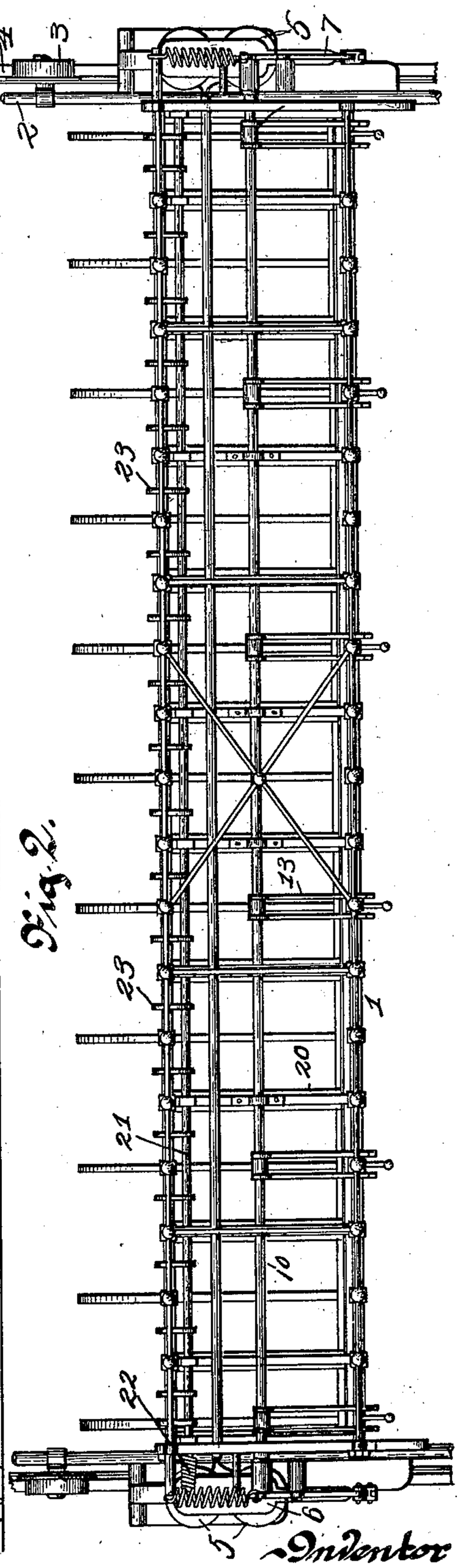

Fig. 2.

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Fig. 4.

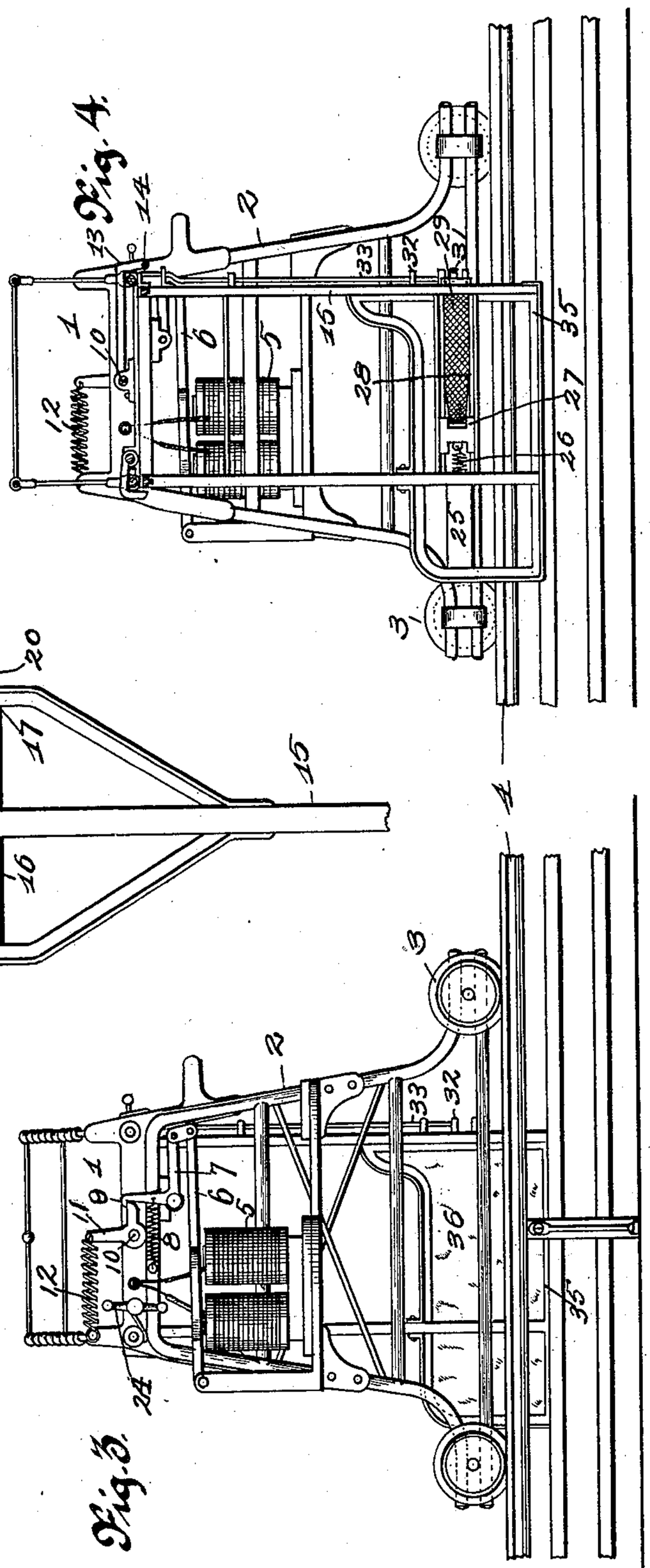

Fig. 7.

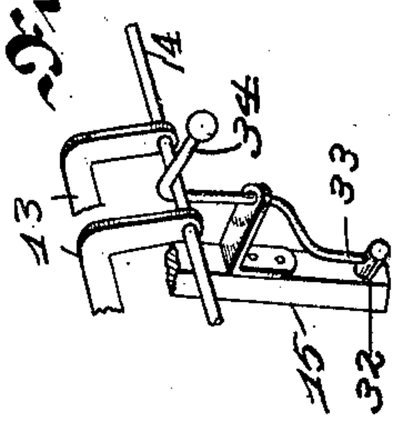

Fig. 5.

Fig. 6.

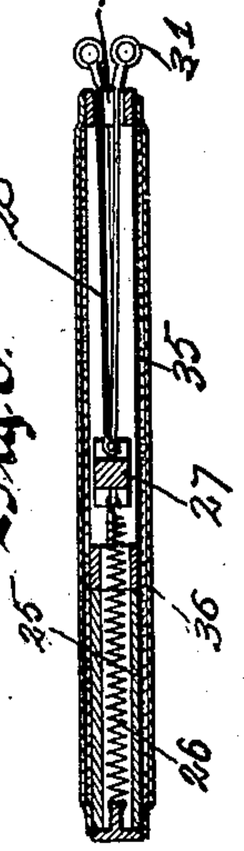

Fig. 8.

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UNITED STATES PATENT OFFICE.

JOHN F. CARR, OF ST. LOUIS, MISSOURI.

HORSE-BREAKER AND STARTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 674,162, dated May 14, 1901.

Application filed January 14, 1901. Serial No. 43,092. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. CARR, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Horse-Breakers and 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 horse-breakers and 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 a movable starting-machine consisting of a series of stalls, each to accommodate a horse and each stall having a removable front barrier, all of which can be moved simultaneously, thereby insuring an even start of all the contestants.

Another object is to provide an improved machine of the class mentioned each stall of which is provided with a front barrier having a fastening device, whereby it may be retained across the front of the stall, and means for automatically removing it from across the stall to release the horse contained therein.

Figure 1 is a front view showing my improved starting-machine. Fig. 2 is a plan view of the same. Fig. 3 is an end view. Fig. 4 is a cross-sectional view taken approximately through the center of the machine. Fig. 5 is an enlarged detail view showing the manner in which the partitions are supported. Fig. 6 is a detail view showing the arrangement of the barriers which are adapted to close the front of the stalls. Fig. 7 is a perspective view showing an essential part of my invention.

My improved horse-breaker and starting-machine consists of an upper horizontal framework supported by end frames mounted substantially in vertical position. The end frames are provided with wheels adapted to operate upon a track, whereby the machine may easily be moved in either direction. Between the end frames is a series of stalls formed by vertical partition-frames, each stall adapted to contain a horse, certain of said frames carrying flexible barriers, which are adapted to be extended across the front of the stalls to retain the horses therein.

Referring to the drawings in detail, 1 indicates the upper horizontal frame, which consists of a number of longitudinal and transverse rods attached together by any suitable means and supported by means of the vertical end frames 2. These consist of metallic rods bent into suitable form, as shown in Figs. 3 and 4. The flanged wheels 3 are attached to the lower ends of the frames 2 and are adapted to operate upon a track 4, consisting of rails having slots, in which the flanges of the wheels 3 operate, thereby guiding the machine in a straight course as it is moved. An electro-magnet 5 is carried by each of the end frames 2, and the said magnets are provided with armatures 6, pivotally mounted above the same. The forward ends of the armatures 6 are pivoted to the bell-cranks 7, supported by the end frames 2. The said armatures are normally held in elevated positions by means of the springs 8, which have their forward ends connected to the vertical portions of the bell-cranks 7 and their rear ends attached to the frames 2. The upper end of each of the vertical members of the bell-cranks 7 is provided with a hook 9, the purpose of which will presently appear.

10 denotes a horizontal rod which is supported by the upper frame 1 and connected to each end of which is a lever 11, having two arms, one of which is adapted to be engaged by the hook 9 of the bell-crank 7. Springs 12 have their forward ends connected to the vertical portions of the levers 11 and their rear ends attached to the frames 2, the tendency of said springs being to draw the horizontal arms of the levers 11 away from the vertical arms of the levers 7. Attached to the rod 10 at suitable intervals are arms 13, the forward ends of which are bent downwardly and carry a horizontal rod 14, the purpose of the said rod 14 being to release the fastening device by which the barriers are held across the front of the stalls.

15 indicates the frames or partitions forming the stalls, and attached to the upper end of each of the said frames is a horizontal frame 16, formed rigid with which are the

lateral extensions 17, which operate within grooves 19, formed in the transverse members 20, carried by the frame 1. The forward movement of the frame 16 is limited by projections or by the termination of the slots 19.

21 indicates a horizontal rod carried near the rear side of the frame 1, and the said rod is provided with a spring 22, whereby it is held in its normal position. A series of arms 23 is rigid with the rod 21, and the rear ends of the said arms are bent downwardly to engage against the rear side of the frames 16, thereby limiting their rearward movement. An operating-handle 24 is connected to the end of the said rod 21.

Carried within each alternate frame 15, adjacent to the lower end thereof, is a spring-casing 25, and a spring 26 is mounted within each of the said casings. The forward ends of the springs are attached to the sliding blocks 27, which operate between the tracks 28, and attached to the front sides of the said blocks are the flexible barriers 29. The said barriers operate through openings 30, formed in the front sides of the frames 15 and carry on their outer ends the rings 31. The frames 15, which are located between the frames which carry the barriers, are provided on their front sides with the projections 32, having vertical openings through which operate the rods 33. The said rods extend above the rod 14 and are provided on their upper ends with the horizontal extensions 34, directly above the said rod 14. Whenever the rod 14 is held in its elevated position by the springs 12, the said rod will engage against the under sides of the extensions 34 and raise the rods 33, releasing them from their engagement with the rings 31 and allowing the springs 26 to draw the barriers 29 from across the front of the stalls. The lower ends of the frames 15 are provided with frames 35, within which are secured pads 36, the purpose of which is to avoid injury to the horse and the rider while in the stalls.

The operation of the machine is as follows: The electric current is cut off from the magnets 5 and the horizontal arms of the levers 11 are engaged with the hooks 9 of the levers 7. This operation lowers the rod 14, permitting the rods 33 to be lowered in their supports. The barriers 29 are then drawn across the forward ends of the stalls, and the rings 31 are engaged over the rods 33, as shown in Fig. 1. Whenever it is desired to release the horses within the stalls, the current is turned into the magnets 5 and the armatures 6 are lowered, removing the hooks 9 from their engagement with the levers 11 and permitting the springs 12 to assume their normal positions and raise the rod 14. As the rod 14 is raised it engages against the horizontal projections 34 of the rods 33 and raises the said rods, releasing the barriers 29, which are moved from across the front of the stalls by their springs 26. The horses in the different stalls are thereby released, giving them an even start, after which the machine may be removed from the track by any known means, as by the use of a derrick or similar device.

The machine is especially adapted for breaking thoroughbreds for racing purposes.

I claim—

1. A starting-machine, consisting of a frame and a series of stalls formed therein, a flexible front barrier for each stall, and means for simultaneously removing all of said barriers and drawing them into the stall-frames, substantially as specified.

2. A starting-machine consisting of a series of frames forming stalls, front barriers for said stalls, means for retaining the said barriers across the front of the stalls, means for simultaneously releasing all of said barriers, and means for drawing said barriers back into the frames forming the stalls, substantially as specified.

3. A starting-machine consisting of a series of frames forming stalls, forming flexible barriers carried within said frames for closing the front of said stalls, means for holding said barriers across the front of the stalls, an operating-rod for simultaneously releasing all of said barriers, and suitable electrical connections for moving said operating-rod, substantially as specified.

4. A starting-machine consisting of a series of frames forming stalls, spring-actuated flexible barriers carried within said frames for closing the front of said stalls, means for holding said barriers across the front of the stalls, a spring-actuated rod for simultaneously releasing the barriers, and means for holding said rod out of contact with the fastening devices which hold the barriers in position, substantially as specified.

5. A starting-machine, consisting of a series of padded frames forming stalls or compartments, spring-actuated flexible barriers carried in said frames for closing the front of said stalls, fastening devices for holding the said barriers across the front of the stalls, an operating-rod for releasing the fastening devices, means for holding the operating-rod out of contact with the fastening devices, and means for releasing the said operating-rod to permit it to remove the fastening devices, substantially as specified.

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

JOHN F. CARR.

Witnesses:
ALFRED A. EICKS,
J. D. RIPPEY.