

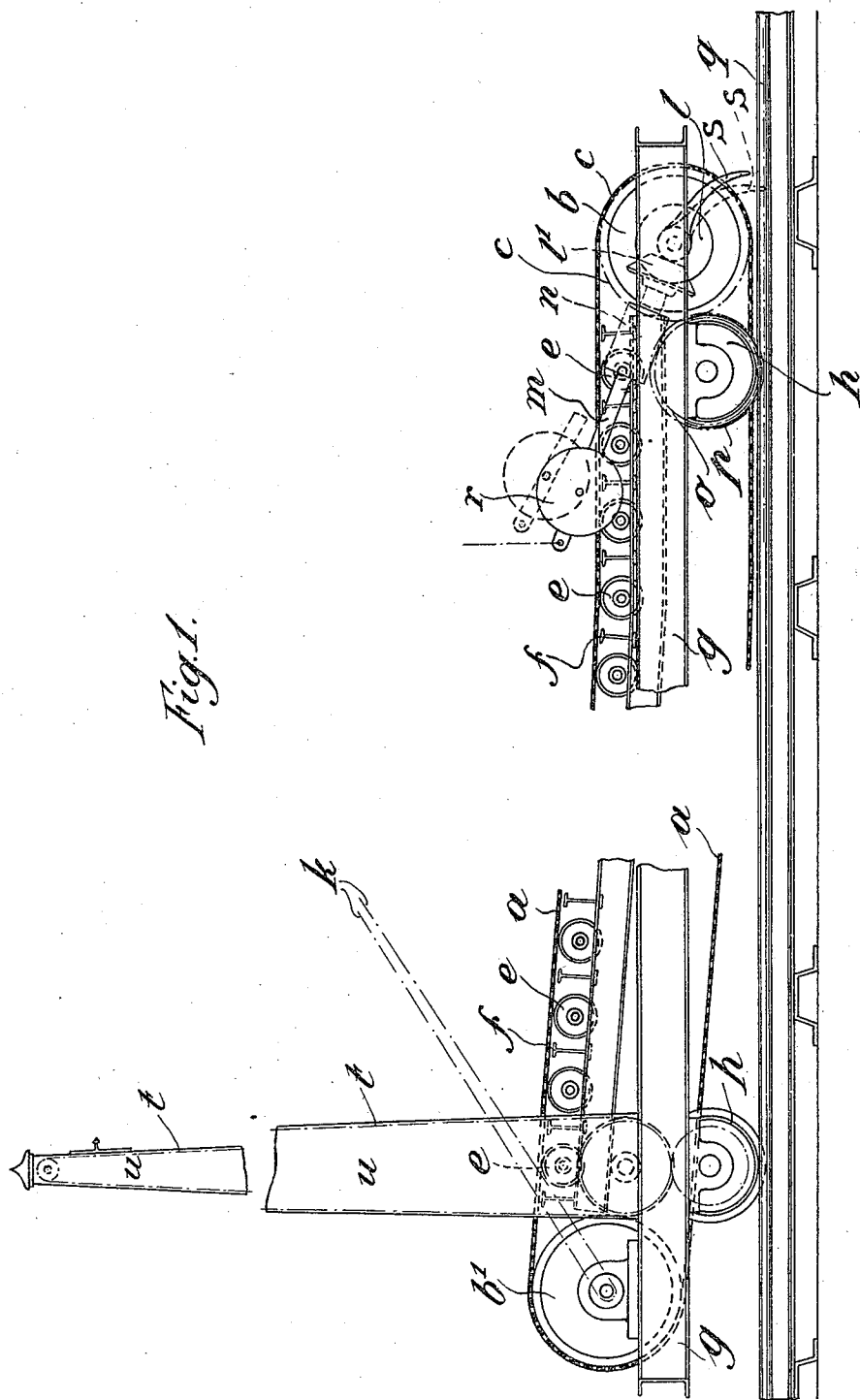
962,057.

A. SCHUMANN.
RACING APPARATUS.
APPLICATION FILED MAY 7, 1909.

Patented June 21, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



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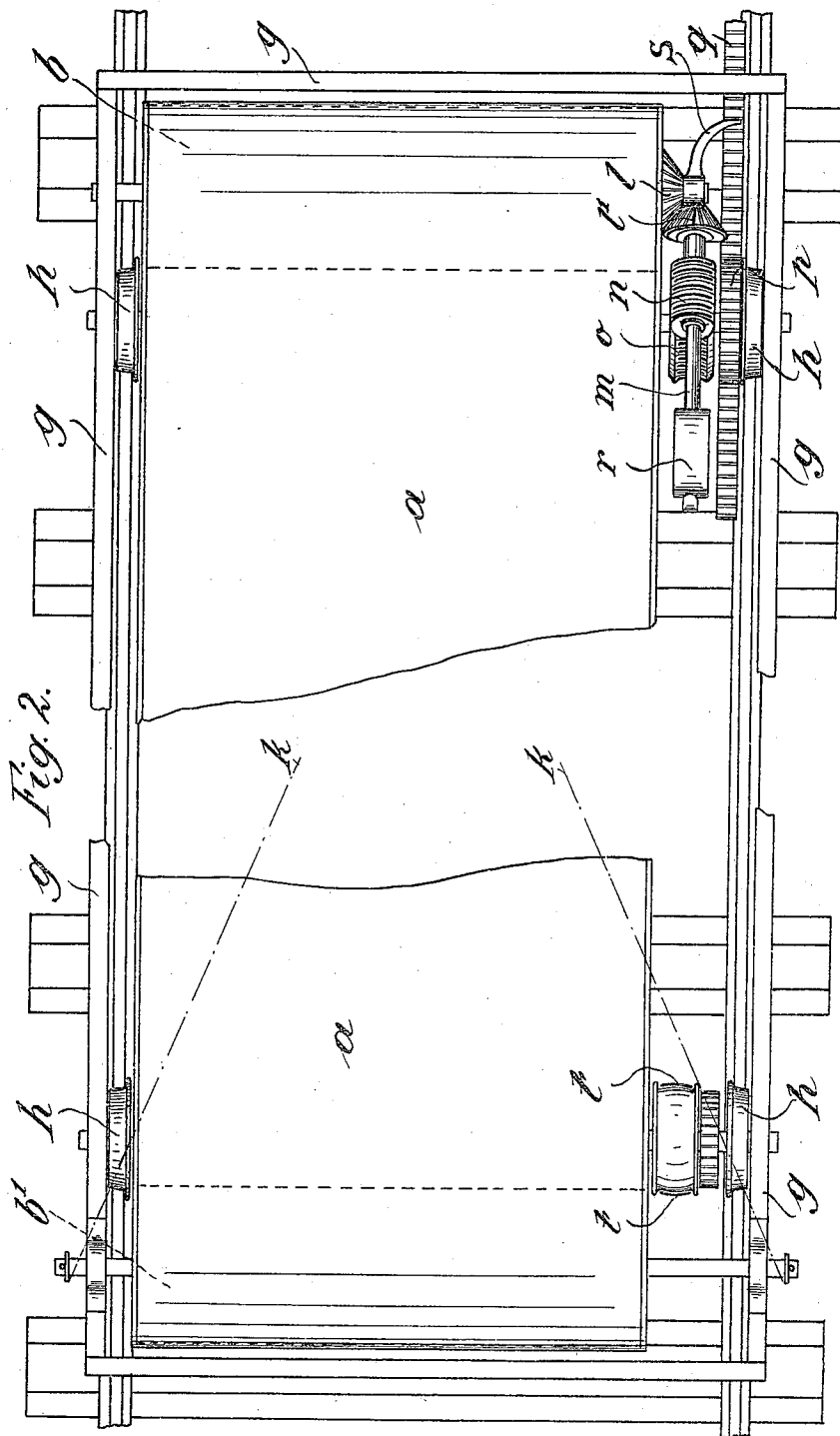
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ALBERT SCHUMANN, OF BERLIN, GERMANY.

RACING APPARATUS.

962,057.

Specification of Letters Patent. Patented June 21, 1910.

Application filed May 7, 1909. Serial No. 494,583.

To all whom it may concern:

Be it known that I, ALBERT SCHUMANN, a subject of the German Emperor, and resident of Berlin, Germany, whose post-office address is 110 Friedrichstrasse, have invented certain new and useful Improvements in Racing Apparatus, of which the following is a specification.

This invention relates to a process and contrivance for horse-races on a limited space or small place, for instance in a circus, on a stage or even in the open.

The process consists therein that the ground on which the horses run is formed in the usual manner by endless dromoi or race-courses guided over rollers, but so that each dromos or course can, at the same time, be shifted forward and according to the speed of its own movement, so that the horses on the course are ahead of each other according to their running-speed. As soon as one of the horses has reached the winning-post, the forward movement of the race-courses can be stopped automatically or by hand, so that thereby the position of all the horses is fixed or ascertained. In addition to this the relative forward movement of the race-courses can be shown by indicating-devices working independently of each other.

The drawing illustrates a sample execution of such an arrangement in Figures 1 and 2 in a side-view and top-view.

Similar letters refer to similar parts throughout the several views.

a is the flexible race-course consisting of any material passing over two drums *b* and *b*¹. The outer borders of the drum *b* are provided with the range of teeth *c* with which engage flat chains fixed to the borders of the race-course, so that thereby there is established a controlled connection between the drum *b* and the race-course. The range of teeth *c* can also be dispensed with if the drum is covered with an india-rubber band and the race-course itself is made of a similar material, so that the latter cannot glide on the drum.

The upper surface of the race-course is preferably inclined toward the front end and supported by rollers *e* arranged between the outer drums in such a manner that the upper surface is sagging, but as little as possible. But in order to limit, when using the device, the sagging of the race-course between the single rollers *e*, there can be arranged between the rollers cross-supports lying a little

lower than the top of the rollers. For the purpose of reducing the frictional resistances of the revolving parts all the pivots can be provided with ball-bearings.

This device is arranged in a frame *g* which is provided with four truckles *h* running on rails. The relative forward movement of the frame *g* with the movable race-course is effected by the following contrivance: The axle of one of the drums is connected through an angle-gear *l* and *l*¹ with a worm-wheel gear *n*, *o*, journaled in the frame, by which latter gear the toothed wheel *p*, likewise journaled in the frame, is rotated. This toothed wheel engages a rack *q* arranged at the side of the rail. The rotation of the above mentioned drum is therefore transformed into a slow forward movement of the frame according to the ratio of transmission of the whole gear. But in order to be able to interrupt the forward movement of the frame *g* at any time, the angle-wheel *l*¹ with the worm *n* is journaled on a shaft *m* oscillating on the axle of the drum *b* standing under the action of a weight or of a spring, so that the said worm *n* can turn, but not be shifted, on the shaft *m*. For, if the shaft *m* is raised, the two worm-wheels *n* and *o* are thrown out of gear, so that the movement of the race-course can no longer be transmitted to the toothed wheel *p*. If the prolongation *s* of the shaft *m* projecting beyond its pivot is transformed into a detent-hook, the latter engages at the same time the rack *q* as indicated in dotted lines in Fig. 1, so that thereby there is checked or stopped at the same time the forward movement of the frame produced by the momentum of the mass. It is thus possible to interrupt and stop the relative forward movement of the horse with the race-course at any moment.

For using the apparatus, the frame is provided with ropes *k* and between the same the horse is placed, so that it can by its running movement move the backward gliding race-course on which it runs, but cannot get away from the same. The measuring and reading of the distance run by a horse can be effected by an endless band *t* provided with a scale with numbers and running over pulleys journaled in a stand *u*. The band can on the stand be protected against any undesired interference by a covering, so that it is only visible behind a pane of the protecting-case. The band is naturally most

suitably driven by one of the truckles h by means of transmission-wheels.

In order to make such horse-races appear more natural, a large number of such apparatus can be arranged side by side, and upon each a horse or other animal be placed.

These apparatus can of course also be used for foot-races of men.

What I claim as my invention and desire to secure by United States Letters Patent is:—

1. In a device of the character described, the combination with a wheeled frame, of an endless race course supported thereon, operating gearing for imparting movement to the wheels of the frame from said race course, and means controlled by said gearing for automatically locking said frame against forward movement, when the gearing is disconnected.

2. In a device of the character described, the combination with a supporting frame, of a track, track wheels upon which said supporting frame is mounted, a rack extending along said track, an endless race course supported in said frame, a toothed wheel engaging said rack, gearing between said toothed wheel and said endless race course, and means for throwing said gearing out of action and simultaneously positively locking said frame against forward movement.

3. In a device of the character described, the combination with a supporting frame, of a track, track wheels upon which said supporting frame is mounted, a rack extending along said track, an endless race course supported in said frame, a toothed wheel engaging said rack, gearing between said toothed wheel and said endless course, means for throwing said gearing out of action, and a detent member carried by said frame and which is brought automatically into engagement with said rack when said gearing is thrown out of action.

4. In a device of the character described, the combination with track rails, of a rack extending longitudinally of said rails, a frame, track wheels upon which said frame is mounted, a pair of drums mounted upon said frame, an endless race course, passing thereover, a worm wheel fixedly mounted with relation to one of the track wheels, a toothed wheel also fixedly mounted with relation to one of said track wheels, said toothed wheel meshing with said rack, a swinging shaft mounted upon the shaft of one of said drums, bevel gear connections between said shaft and the shaft of said drum, and a worm carried by said shaft and meshing with said worm wheel.

5. In a device of the character described, the combination with track rails, of a rack extending longitudinally of said rails, a frame, track wheels upon which said frame is mounted, a pair of drums mounted upon said frame, an endless race course passing thereover, a worm wheel fixedly mounted with relation to one of the track wheels, a toothed wheel also fixedly mounted with relation to one of said track wheels, said toothed wheel meshing with said rack, a swinging shaft mounted upon the shaft of one of said drums, bevel gear connections between said swinging shaft and the shaft of said drum, a worm carried by said shaft and meshing with said worm wheel, and a detent member carried by said swinging shaft and adapted to move into engagement with said rack when said worm is thrown out of engagement with said worm wheel.

The foregoing specification signed at Berlin, Germany, this twenty-third day of March, 1909.

ALBERT SCHUMANN.

In presence of—

HENRY HASPER,
WOLDEMAR HAUPT.