No. 663,948. Patented Dec. 18, 1900.

A. D. WEIL.

SYSTEM OF ROUNDABOUTS.

(Application filed Mar. 21, 1900.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

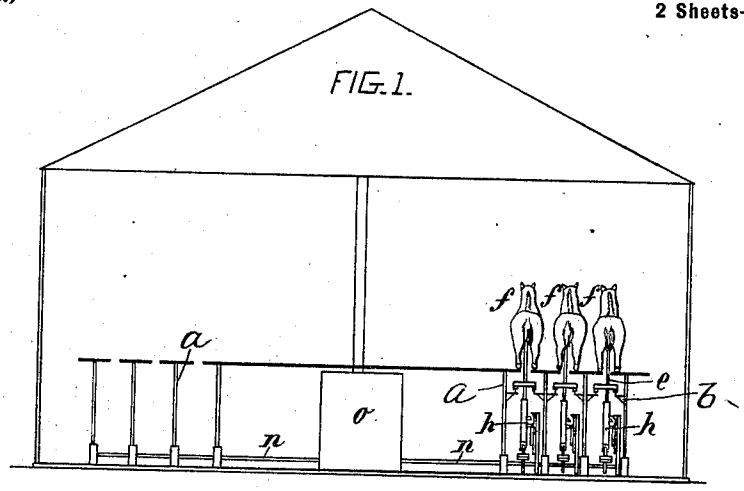


FIG. 2.

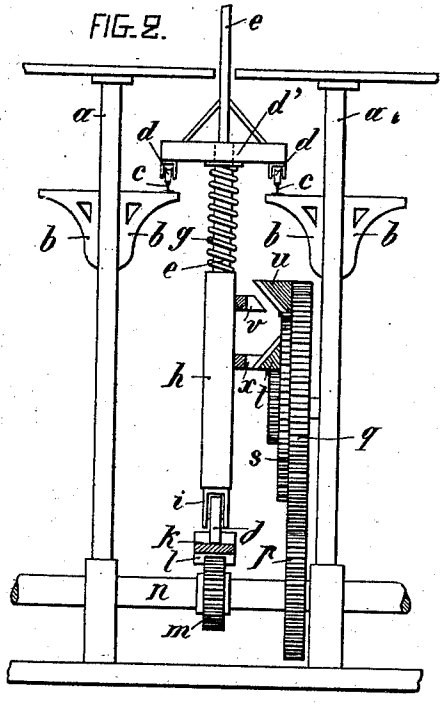


FIG. 3.

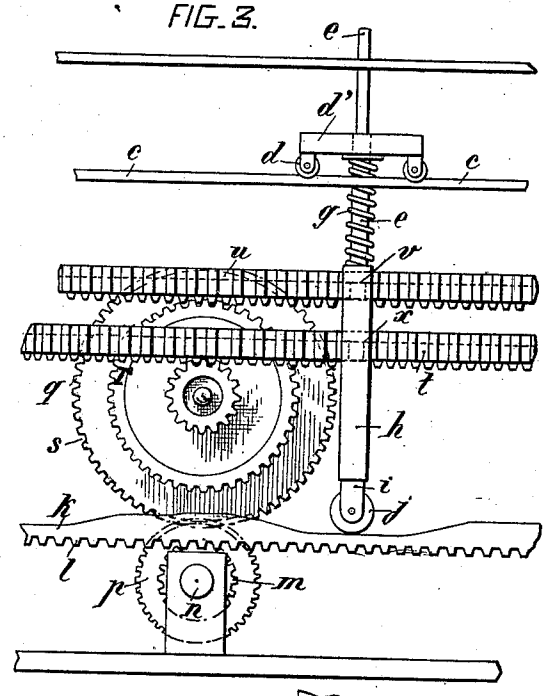
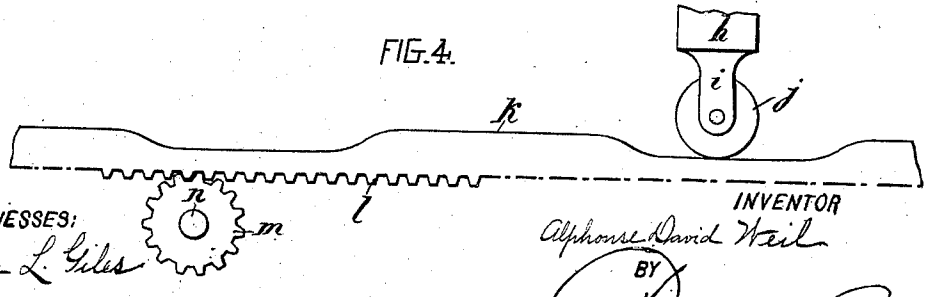


FIG. 4.



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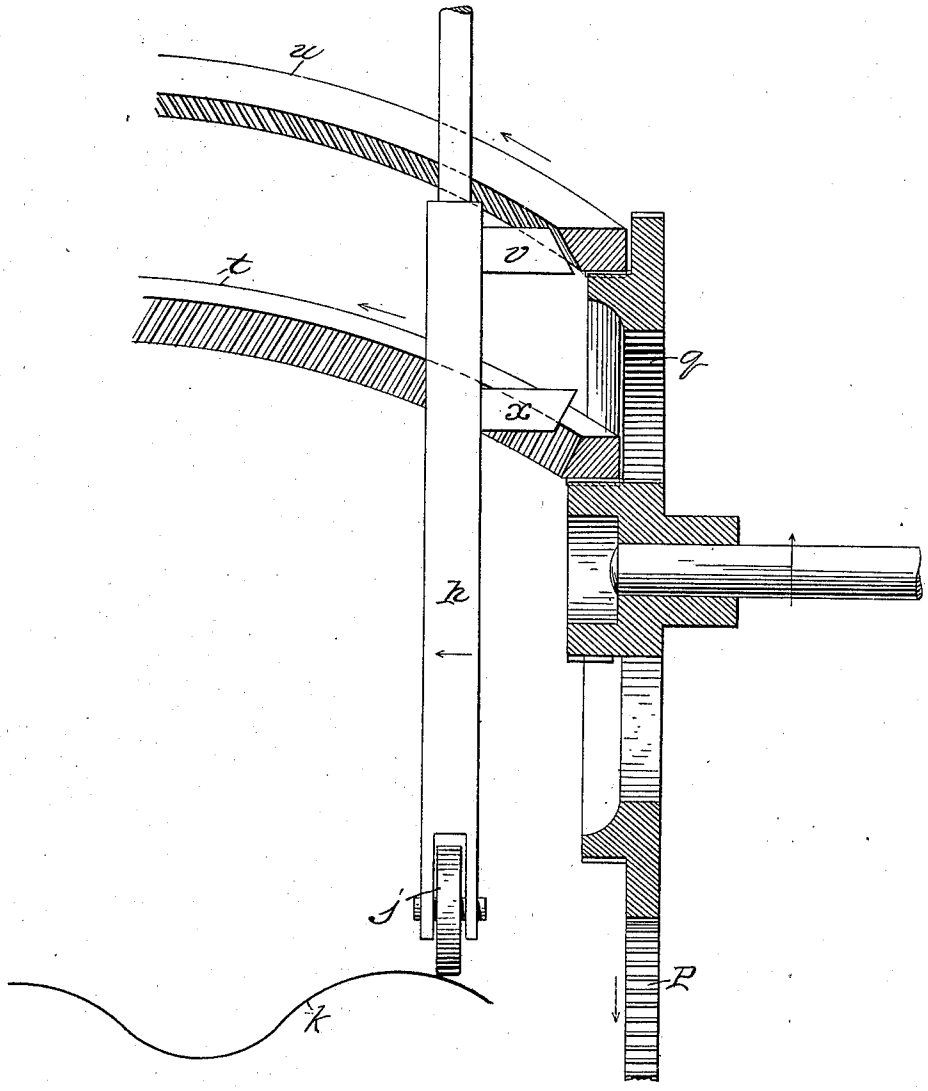
(No Model.) 2 Sheets—Sheet 2.

Fig. 5.



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UNITED STATES PATENT OFFICE.

ALPHONSE DAVID WEIL, OF PARIS, FRANCE.

SYSTEM OF ROUNDABOUTS.

SPECIFICATION forming part of Letters Patent No. 663,948, dated December 18, 1900.

Application filed March 21, 1900. Serial No. 9,566. (No model.)

To all whom it may concern:

Be it known that I, ALPHONSE DAVID WEIL, merchant, of 10 Rue Sainte-Cécile, in the city of Paris, Republic of France, have invented a System of Roundabouts, of which the following is a full, clear, and exact description.

This invention relates to a new system of roundabouts in which the horses receive circular motion in varying respective speeds, so as to afford the illusion of a race.

My invention includes an undulated movable track by which the arms attached to the vertical stems of each horse place themselves alternately in contact with movable toothed circles, which receive, respectively, different speeds and act as drivers.

The invention is shown in the accompanying drawings, in which—

Figure 1 is a cross-section of the whole of my device in an arrangement for three horses. Fig. 2 shows in cross-section the mechanism for one of each of the horses. Fig. 3 is a side view of the same. Fig. 4 shows one of the undulated movable tracks which serve to lift and lower the arms attached to the vertical stem of each horse. Fig. 5 is a detail view.

In the several figures the same letters of reference indicate like parts.

As shown in the drawings, my device comprises a circular frame *a*, provided with brackets *b*, upon which the rails *c* are secured. Said rails *c* receive the rollers *d* of the carriage *d'*, in which is inserted a vertical rod or stem *e*, which carries the horse *f*. The lower continuation of the vertical stem is provided with a helical spring *g* and a socket *h*, terminated by a fork *i*, provided with a roller *j*. The roller *j* moves upon a movable track *k*, provided with undulations, which act as cams for lifting the socket *h* of the stem *e*, while the helical spring *g*, acting downward on the socket, causes the roller *j* to go down into the recesses of the track. The undulated track *k* is provided with an indented rack *l*, gearing with a pinion *m*, carried by the driving-shaft *n*, to which motion is transmitted by the motor *o*, preferably located in the middle of the roundabout, Fig. 1. The driving-shaft *n* carries a pinion *p*, gearing with a gear-wheel *q*, having on its front two toothed wheels *r s*, which transmit motion to two parallel horizontal toothed circles *u t* or drivers, whose centers are the same as that of the roundabout. When the shaft *n* is put in motion, it drives the undulated track *k* by the action of the pinion *m* on the indented rack *l*. The said driving of the track *k* will lift roller *j*, and in consequence also the socket *h*, and place the upper arm *v* of the said socket in contact with the horizontal toothed circle or driver *u*. The horse thus receives the motion of the circle *u*, which itself derives motion through the wheel *q* and the pinion *p*, carried by the driving-shaft *n*. When the roller *j* comes down into a recess of the track *k*, it is followed down by the socket *h*, acted upon by the spring *g*. Thus the arm *v* of the socket disengages itself from the circle *u*, and the arm *x* of the socket is placed in contact with the circle or driver *t*. The horse will then receive its motion from and take the speed of the circle *t*.

I can arrange any number of horses side by side.

The forms, details, and accessories of my device may of course vary without departing in any way from the principle of my invention.

I claim—

1. In combination in a roundabout, an undulating movable track *k*, means for driving the same, a plurality of drivers moving at different speeds, the figure to which motion is to be imparted, and means controlled by the undulating track to throw the said figure into connection with first one driver and then the other, substantially as described.

2. In combination in a roundabout, a movable undulating track *k*, a rack thereon, a pinion *m*, meshing with said rack, the figure to be driven, a socket *h* connected therewith and having an arm *v*, a plurality of drivers *t*, *u*, a gear-wheel *q* having means for giving the said drivers a differential speed, a pinion *p* for moving the gear-wheel *q*, a drive-shaft *n*, carrying the pinions *m* and *p*, the carriage or slide *d'* for guiding the horse, the rails upon which the slide moves, and a connection between the figure and the socket, substantially as described.

The foregoing specification of my system of roundabouts signed by me this 8th day of March, 1900.

ALPHONSE DAVID WEIL.

Witnesses:
EDWARD P. MACLEAN,
MAURICE H. PIGNET.