(No Model.) 2 Sheets—Sheet 1.

W. J. & F. E. GORDON.

RIDING, AMUSEMENT, AND INSTRUCTING DEVICE.

No. 525,596. Patented Sept. 4, 1894.

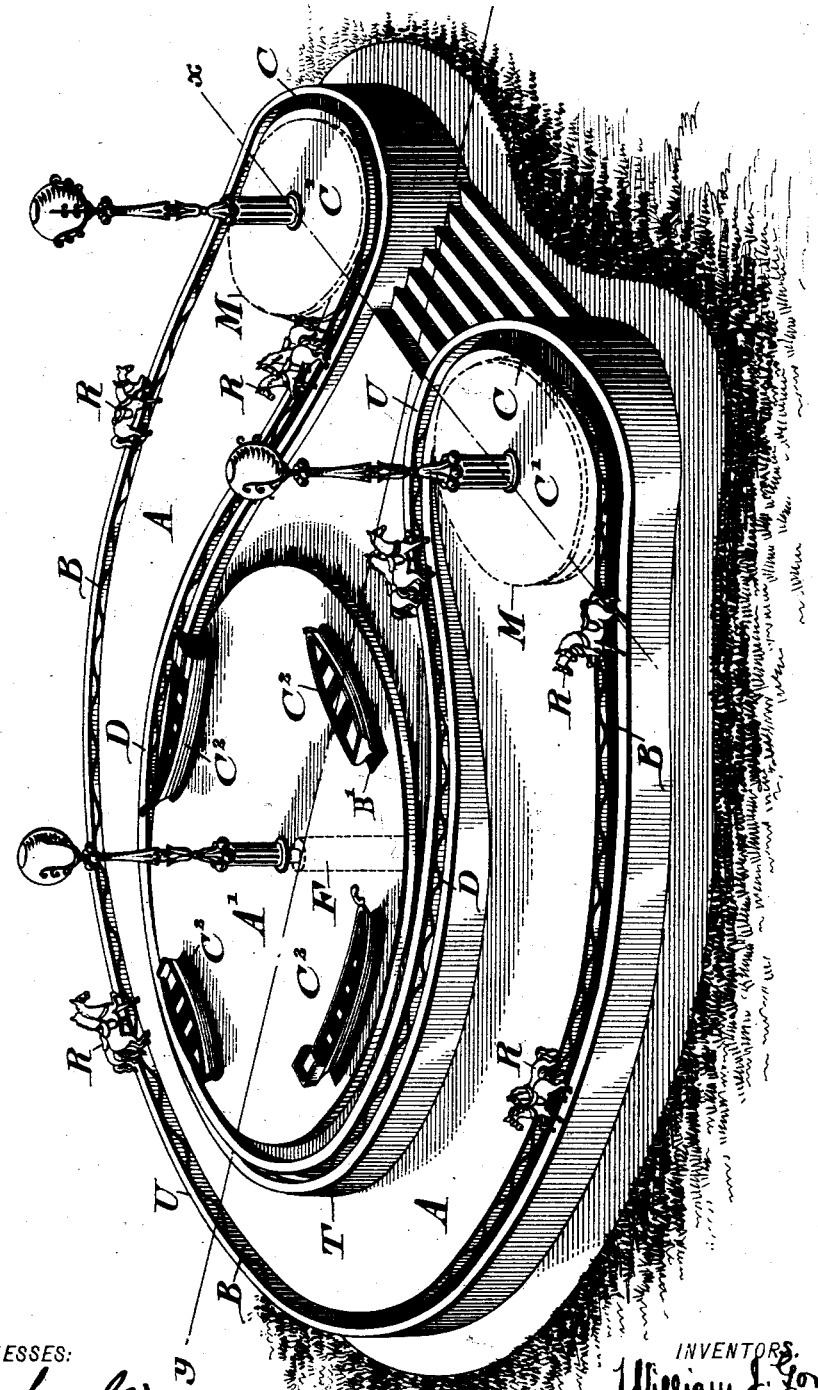

Fig. 1.

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Fig. 2.

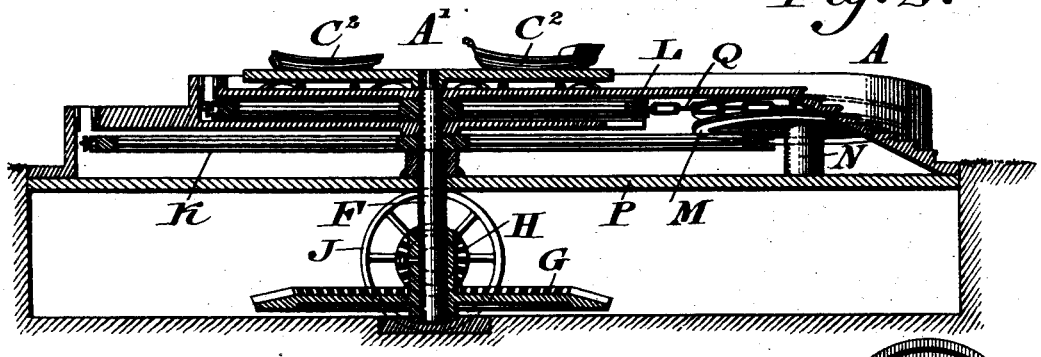


Fig. 3.

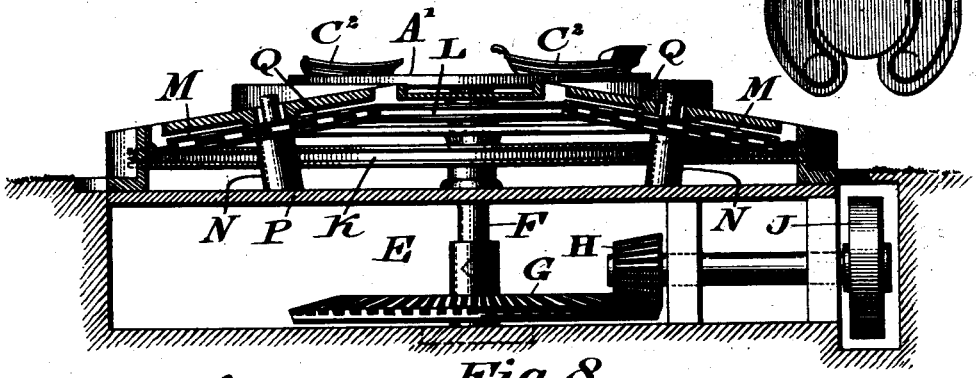


Fig. 9.

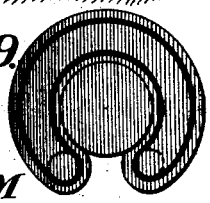


Fig. 4.

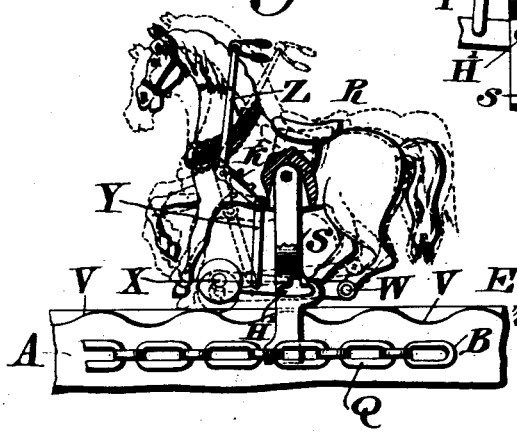


Fig. 8.

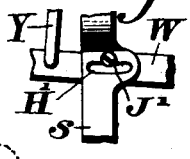


Fig. 7.

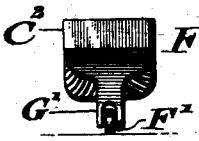


Fig. 6.

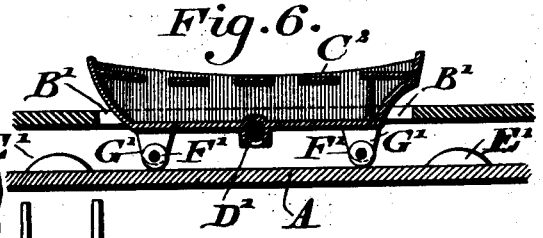
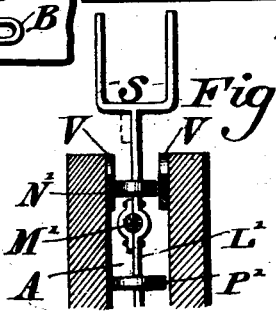


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM J. GORDON AND FORREST E. GORDON, OF PHILADELPHIA, PENNSYLVANIA.

RIDING, AMUSEMENT, AND INSTRUCTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 525,596, dated September 4, 1894.

Application filed December 20, 1893. Serial No. 494,192. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. GORDON and FORREST E. GORDON, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Riding, Amusement, and Instructing Devices, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention relates to an improvement in amusements somewhat of the order of a merry-go-round, in which figures or riding devices may be made to move in cantering or steady motions, and the occupants of the same may be instructed in riding. The course of the figures or riding devices is such that the rider is prevented from becoming dizzy, and said course is made to raise and lower, so that the animals or riding devices follow the same. Boats or other seating devices are also provided, and means employed for imparting rocking motions to the same, as will be hereinafter set forth.

Figure 1 represents a perspective view of a device embodying our invention. Fig. 2 represents a longitudinal section on line *y*—*y*, Fig. 1. Fig. 3 represents a longitudinal section on line *x*, *x*, Fig. 1. Fig. 4 represents a side elevation of a detached portion on an enlarged scale. Fig. 5 represents a vertical section of a portion showing a cable in lieu of a chain for imparting motion to the figures. Fig. 6 represents a section of a working boat and operating mechanism on an enlarged scale. Fig. 7 represents an end view thereof. Fig. 8 represents a side elevation of a portion of Fig. 4 in a different position. Fig. 9 represents a top or plan view of another form of the floor and channel.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates a floor in which is a channel B, which extends in elliptical or curved form for a portion of its length, then approaches as at C, and describes an inner-ellipse or curve as at D, all as continuities, producing a horse-shoe shaped structure, the heels of which are shown at C′. Mounted in the base E, at the centers of said channels B and D is a shaft F, to which is connected the bevel wheel G, with which meshes the bevel pinion H, to which power is communicated by means of the driving pulley J.

Connected with the shaft F, is a driving wheel K, which receives power therefrom, said shaft also carrying the guide pulley L, which is loose thereon. Pulleys M are mounted in oblique direction on the shafts N, which are supported on the lower floor P, said pulleys M occupying the portions of the space below the floor A at the centers of the heel channels C′ of the structure. Passing around the pulleys K, L, and M, is an endless chain or conveyer Q, whereby as the wheel K is rotated, motion is imparted to said conveyer.

R designates figures, in the present case those of horses, which are connected by means of standards S with the conveyer Q, so that said figures are carried around the channel B, C, D. A portion of the walls of said channel rises as at T, and another portion is accordingly lowered as at U, so that the figure ascends and descends as it describes the course of the channel, hence the pulleys K, L, and M are so disposed that the conveyer Q passes from one to the other, and raises and lowers as it moves along, so as to conform to the ascent and descent of the channel, it being seen that said course breaks a truly-circular motion of the figures, and causes the latter to pass around one side of the main portion of the channel B, then around one portion C, next around the portion D, and then around the other portion C, and finally joins the other side of the main portion D, by which provision the rising is accomplished in a circuitous course without causing the rider to sicken or become dizzy.

Referring to Fig. 4, on the inner walls of the channel are ledges V, the upper surfaces of which are undulating so as to be adapted to impart rocking motions to the figure. For this purpose, there is pivoted to the feet of the figure, the arm W, which carries on its free end the roller X, which is adapted to ride on the ledges V. In order to raise the arm, and thus render said roller inoperative, there is pivoted to the same and the figure, the tog-

gle lever Y, to which is connected the handle lever Z, whereby when the toggle lever is in the position shown in Fig. 4, the roller is inoperative. When however, said toggle is moved to the position shown in dotted lines, the arm is lowered and made rigid, so that as the roller rides on the ledges the figure rises and falls, oscillates or rocks, and simulates the motions of cantering, galloping, or the like. When the arm is raised, the rocking motions cease, and the figure is simply carried around the course.

Connected with the shaft F, is a platform A′, in which are slots B′, to receive the lower portions of the boats C^2, which are axially mounted on cross bars or shafts D′ on said platform. Rising at intervals from the floor A, beneath said platform, are lugs E′, on which the pulleys F′ of the boats F are adapted to ride, see Fig. 6, said pulleys being mounted on arms G′, depending from said boats, it being evident that as the platform is carried around by the shaft D, the lugs E′ cause the boats to rise and fall, or rock, simulating motions on water.

In order to hold the arm W in elevated position, and thus hold the roller X above the serpentine or undulating surfaces of the ledges V, which latter are employed for imparting rocking motions to the figure R, as has been stated, the standards S are formed with slots H′, somewhat of an inverted T-shape, and a screw J′ is adapted to pass through either of the limbs of said slot into the arm W. When the screw is in the vertical limb of the slot and tightened, the arm W is immovably secured to the standard, and the figure is prevented from rocking. When the screw is in the horizontal limb of the slot, or entirely removed, the figure may rock on the standard, and when the arm W is lowered by the toggle Y, the roller X may be brought into contact with the ledges V, it being noticed that the figure is pivoted to said standard and the toggle Y is provided with a stirrup K′, so that when the figure is occupied, the weight of the rider lowers the forepart of the figure, which is now heavier than the rear part, or is eccentric, so that the roller X descends to the depressions of the ledges, and the rise of the latter then elevates said roller, whereby the figure receives its rocking motions.

In Fig. 9, we show another form of the floor and channel therein of somewhat different shape from Fig. 1, without however producing different results. It is evident that worm gearing may be employed in lieu of the bevel wheels shown, and power may be communicated directly to the pulley L, the same then being transmitted to the other pulleys. In this case, the pulleys M may be in horizontal position, and the floor A be made flat or without the ascent and descent in Fig. 1.

In Fig. 5, we show the hanger L′, depending from the arm S, the same being connected or gripped with the cable M′, and carrying the rollers N′, P′, which are adapted to run on either wall of the channels A, B, &c., and thus guide the figure in its motions.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A device for the purpose stated, consisting of a floor having outer and inner channels therein, heel channels adjoining the adjacent ends of said outer and inner channels, a shaft with a driving wheel and loose pulley thereon at the center of the outer and inner channels, shafts with pulleys at the centers of the heel channels, and a conveyer on said wheel and pulleys, said parts being combined substantially as described.

2. A device for the purpose set forth consisting of a floor having outer and inner channels therein with channels continuous of and connecting the heel portions of said outer and inner channels, pulleys journaled within said inner and heel connecting channels, an endless conveyer within said channels and around said pulleys, and mechanism for rotating said pulleys, said parts being combined substantially as described.

3. A device for the purpose named having a floor with a continuous channel therein having outer and inner curved portions, the shaft F with the driving wheel K, and the loose pulley L thereon, the oblique shafts N, N, with the pulleys M, M, thereon, and the conveyer Q on said wheel K, and pulleys L, M, M, and in said continuous channel, substantially as described.

4. A floor with a channel therein, a conveyer in said channel, a stationary ledge connected with the wall of said channel, a standard connected with said conveyer, a figure pivoted to said standard, an arm pivoted to said figure and having a pin working in a slot in said standard, a lever connected with said figure and arm, and a roller on said arm adapted to ride on said ledge, said parts being combined substantially as described.

5. A floor with a channel, an undulating ledge on the wall of said channel, a conveyer, a rocking figure, a standard connected with said conveyer and adapted to course in said channel, said figure being mounted on said standard, an arm pivoted to said figure, and means for lowering said arm whereby it may be engaged with said ledge for imparting rocking motions to said figure while being carried around by said conveyer, substantially as described.

6. In a device substantially as described, an undulating ledge a rocking figure, and a standard supporting the same, a conveyer to which said standard is connected, an arm pivoted to said figure, and carrying a roller, and a toggle lever which is mounted on said figure and attached to said arm, said parts being combined substantially as described.

7. A floor with a channel having an undulating ledge therein, a conveyer with a standard secured thereto, said standard having a T-shaped slot therein, a figure mounted on said standard, an arm pivoted to said figure and having a roller mounted thereon traveling in said ledge, and a pin secured to said arm and in said T-shape slot, said parts being combined substantially as described.

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