May 30, 1933.

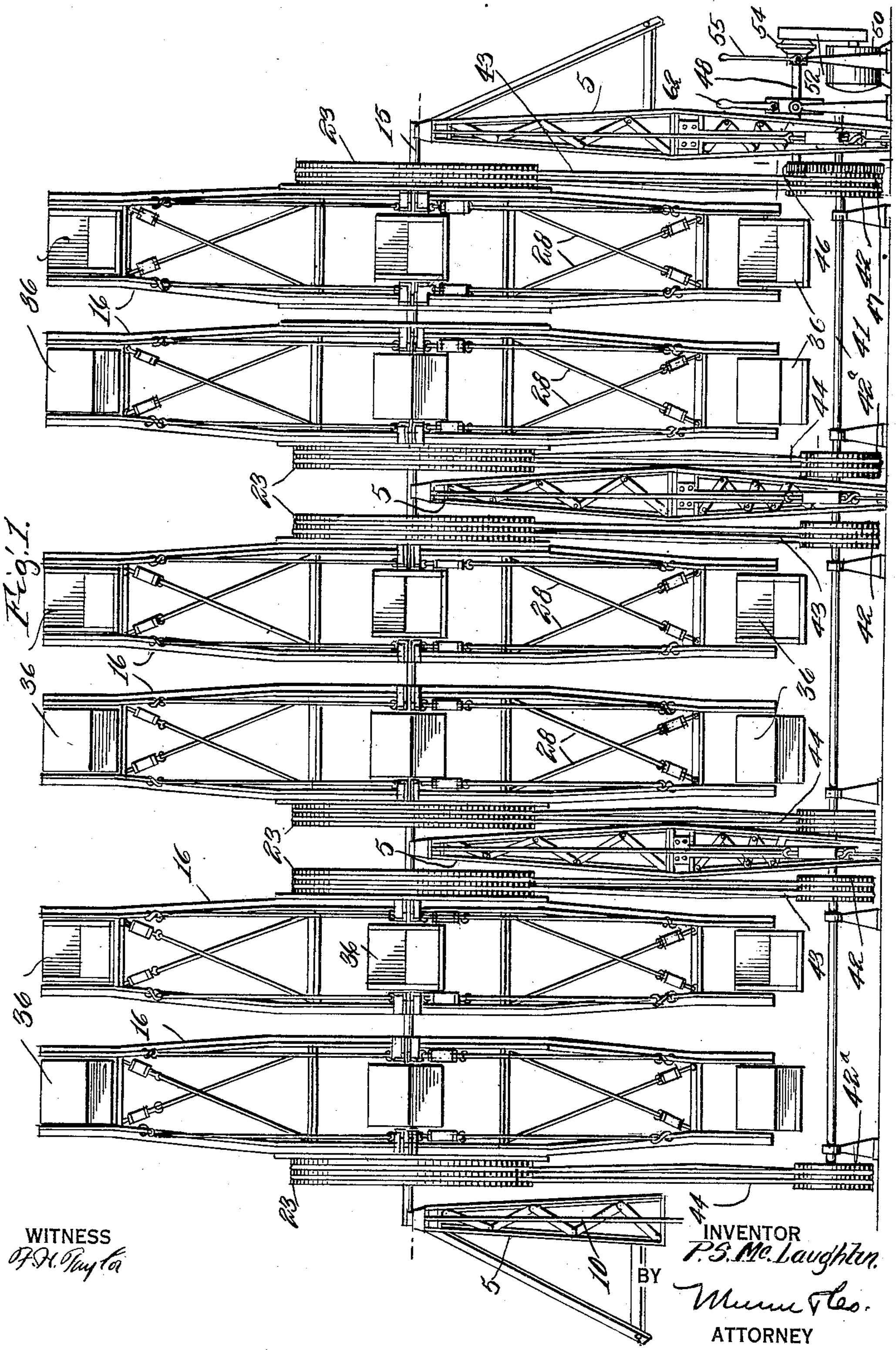
P. S. McLAUGHLIN

1,911,915

AMUSEMENT APPARATUS

Filed Nov. 11, 1930

3 Sheets-Sheet 1



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AMUSEMENT APPARATUS

Filed Nov. 11, 1930 3 Sheets-Sheet 2

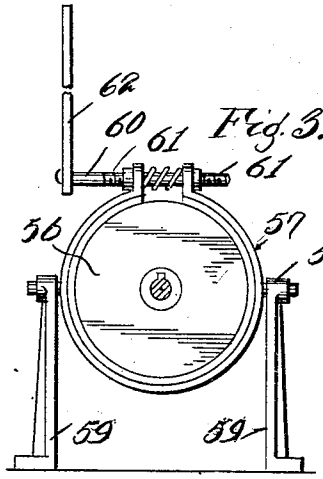

Fig. 3.

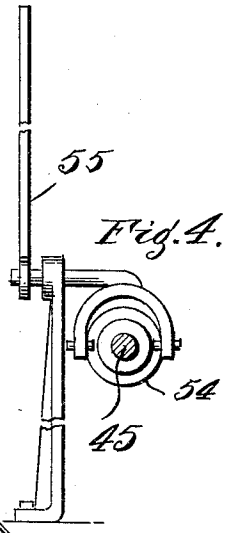

Fig. 4.

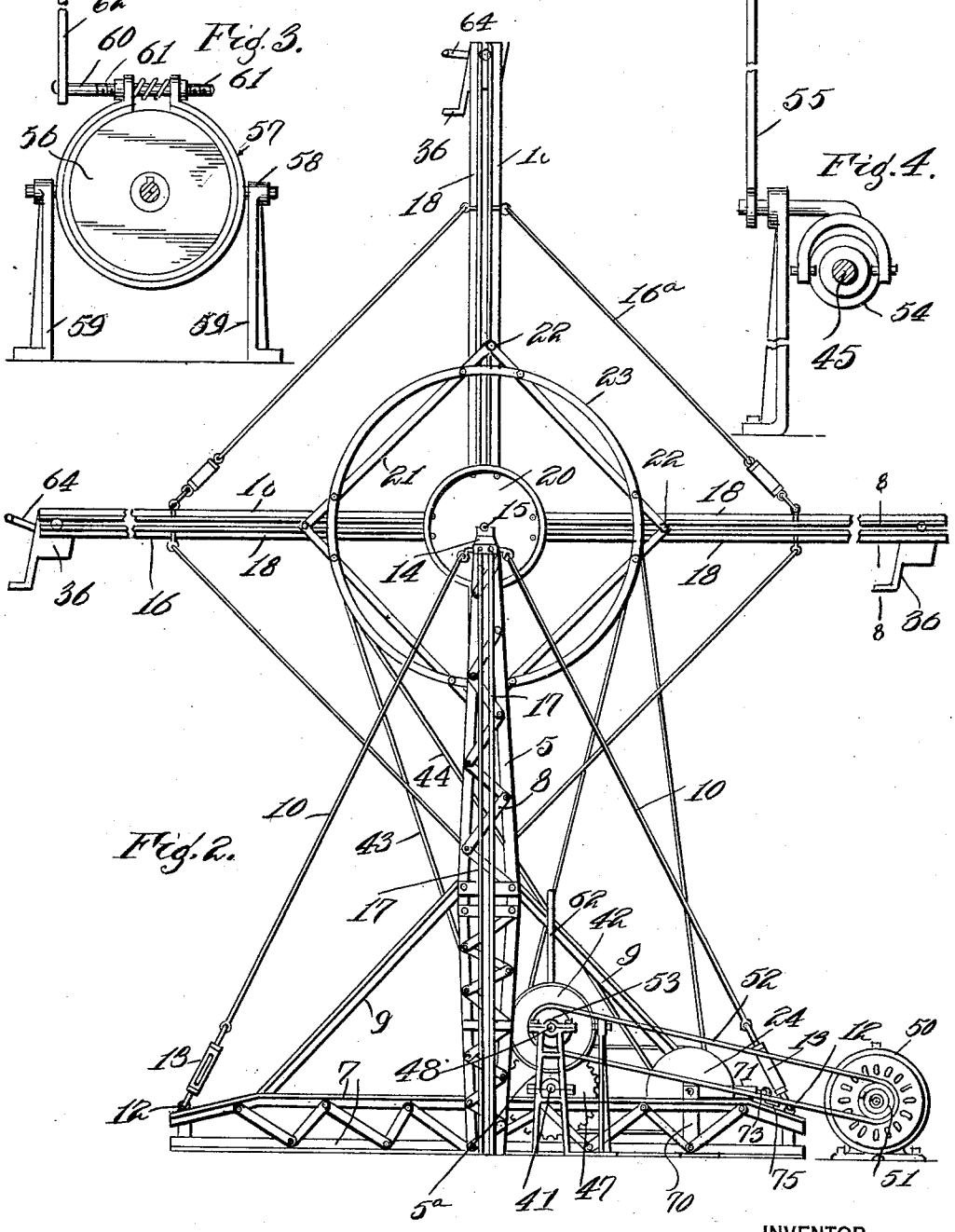

Fig. 2.

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AMUSEMENT APPARATUS

Filed Nov. 11, 1930 3 Sheets-Sheet 3

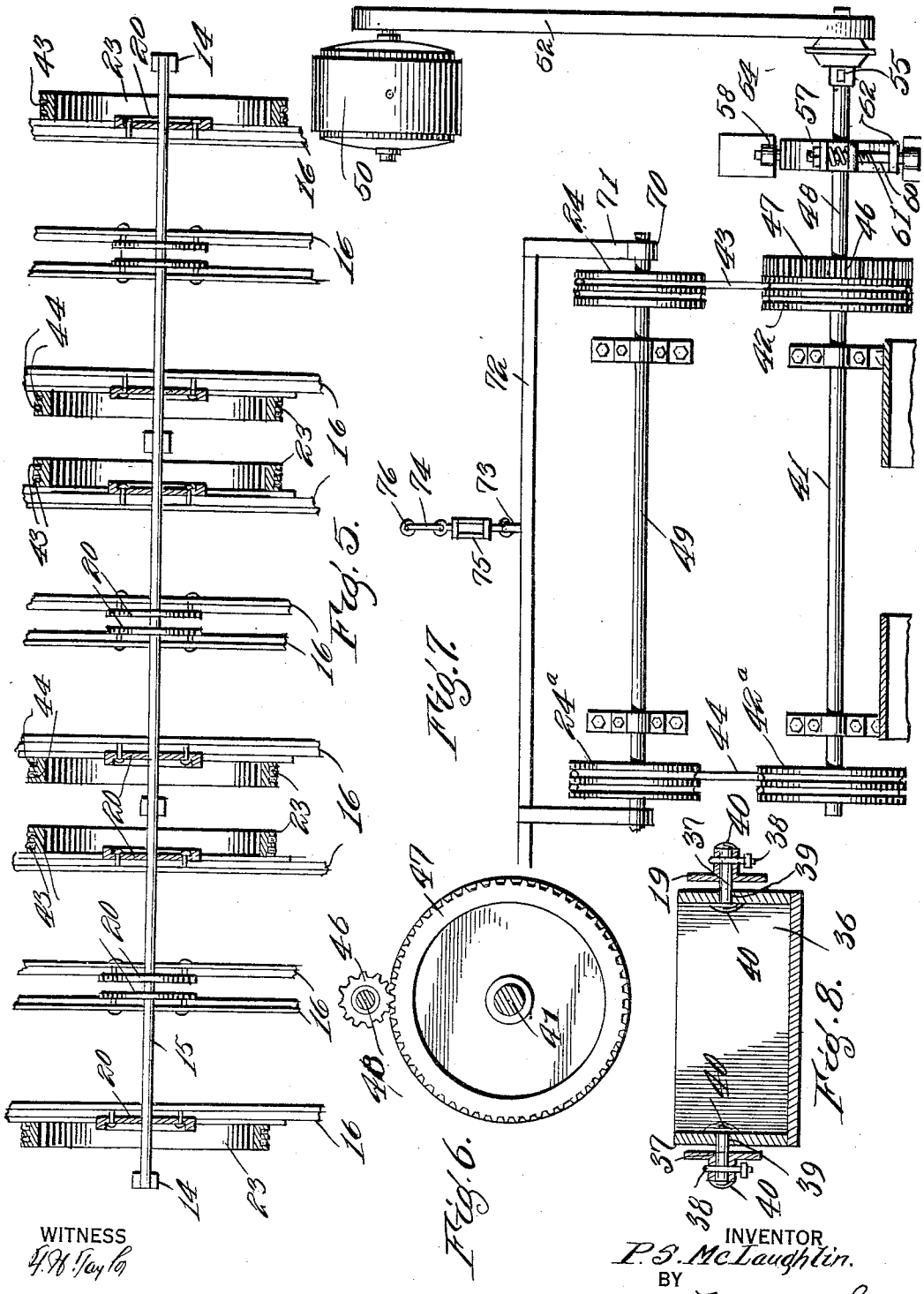

Fig. 5.

Fig. 7.

Fig. 6.

Fig. 8.

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UNITED STATES PATENT OFFICE

PHILIP S. McLAUGHLIN, OF FORTY FORT, PENNSYLVANIA

AMUSEMENT APPARATUS

Application filed November 11, 1930. Serial No. 494,953.

My invention relates to amusement apparatus and more particularly to a rotary passenger carrying mechanism.

An object of the invention is the provision of an amusement device for carrying passengers through a rotary path with the passenger seated at the ends of radially projecting beams located at right angles to each other.

A further object of the invention is the provision of an amusement device in which passenger seats are swingably mounted at the ends of radially disposed beams, a mechanism being provided for driving alternate beams in a rotary path which is to the direction of rotation of the other beams.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawings forming a part of the specification; nevertheless it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claim.

Figure 1 is a front elevation of my improved amusement apparatus;

Figure 2 is an end elevation of the same;

Figure 3 is a detail in elevation of a brake embodied in the actuating mechanism of the amusement apparatus;

Figure 4 is a detail in elevation of a control clutch embodied in the apparatus;

Figure 5 is a longitudinal sectional view of the invention;

Figure 6 is a transverse vertical section taken adjacent the driving gears;

Figure 7 is a fragmentary plan view of the driving mechanism for the beams;

Figure 8 is a vertical longitudinal section of a passenger seat;

Referring to the invention in detail a plurality of longitudinally alined vertical columns 5, attached to horizontally disposed ground engaging feet 6, is provided. The columns 5 and supporting feet 6 are built from angle rails 7 connected together by truss or brace elements 8.

To lend rigidity to the columns, they are braced by angularly disposed braces 9 which are connected with the feet 6. To further brace the columns, guy wires 10 are attached to the upper ends of the columns at opposite sides thereof, and have their lower ends, connected to the opposite ends of the feet 6, as at 12. Turn buckles 13 are interposed in each of the guy wires to maintain the same under proper tension.

Extending from each two adjacent vertical columns and supported on heads 14 attached to the upper ends thereof is a fixed horizontal shaft 15, the ends of the latter being secured to the heads in any approved manner. Rotary passenger carrying beams 16 are journalled upon each of the shafts 15. These beams are identical in construction and a detail description of one will suffice for all. As particularly illustrated in Figure 2, the beams 16 comprises pairs of substantially parallel side members 17, each of which consists of oppositely arranged angle rails 18 between which transverse T-shaped in cross section bars 19 are held at spaced intervals.

Flanged disks 20 are mounted for rotation on the shaft 15 and are rigidly secured to the beams 18. A rectangularly shape brace 21 is attached at the right angle portions to the beams 16 as shown at 22. This brace may be in the form of bars joined together at the ends and when connected to the beams.

To each brace is secured a grooved wheel 23 which receives the cables 43 and 44 and it will be noted that each wheel has a pair of annular grooves for the purpose. The cables are trained on grooved wheels 42 and tightener pulleys 24. On alternate pulleys 24 and wheels 42 the cables are twisted in order to provide for a reverse rotation of alternate units composed of four radiative beams 16.

Oppositely arranged passenger carrying seats 36 are carried by the opposite ends of each of the swinging beams. To pivotally suspend the seats from the beams, pairs of transversely alined stub shafts 37 are held between the angle rails 18 by U-shaped fastenings 38 passing through these angle rails and embracing the stub shafts. The side walls of the seats are provided with trans-

versely alined openings 39 which pivotally receive the shafts. Heads 40 are formed upon the opposite ends of the stub shafts to retain the latter against longitudinal shifting.

To continuously rotate the beams 16 a common drive mechanism is provided which comprises a drive shaft 41 arranged parallel to the shaft 15 and journalled in the standards 5^a below these shafts. Grooved wheels 42 are fixed to the shaft 41, each of which being arranged in vertical alinement with one of the grooved wheels 23. The cable 43 is engaged with pairs of coinciding alternate grooved wheels 42 and 23, while cables 44 are trained on the other wheels 42^a and 23^a.

A shaft 48 journalled in bearing on the standards 5^a and below shaft 41 has a gear 46 rigid therewith which drives a gear 47 secured to the shaft 41. The grooved pulleys 42 and 42^a are spaced along the shaft 41 and are rigidly secured thereto. The cables 43 and 44 are given several turns on their respective pulleys 42, 24 and 42^a, 24^a in order to insure positive driving of the beams.

The grooved pulleys 24 and 24^a and likewise the shaft 49 provide means for tightening the cables when desired and are therefore adjustably mounted. The shaft 49 is carried by the upper ends of swingably mounted bars 70 from which extend rearwardly bars 71. These bars are connected together by rods 72. A hook 73 is secured to each rod 72 and links 74 and a turn buckle 75 connect each rod to a fixed point 76 on the frame work forming turnbuckle 75 in one direction the bricks will move the rod 72 and likewise the pulleys and shaft 49 outwardly and thereby tighten the cables 43 and 44.

A suitable electric motor 50, having a drive pulley 51 engaged by a drive belt 52 passing around a drive cone 53 loose on the shaft 48, is provided. A clutch member 54 adapted to frictionally engage the drive cone 53 is keyed to the shaft 48. A hand lever 55 is operatively connected with the clutch element 54 to render the drive shaft 48 operative and inoperative.

A brake drum 56 is fixed to the shaft 48. A brake shoe 57, encircling the brake drum 56, is pivotally supported, as at 58, in upstanding brackets 59. A rod 60, passing transversely through the extremities of the brake is provided, with right and left threads 61 whereby the brake band is contracted to engage the drum 57. An actuating handle 52 is fixed to the threaded rod 60.

A safety bar 64 is carried by each of the seats 36 to prevent the passengers from falling therefrom.

The operation of my device is as follows: A switch, not shown, is placed in an operative position in order to energize the motor 50 and through the pulley 51, the belt 52 is actuated and likewise the idler pulley 53. The amusement device is then ready to receive passengers. As soon as the passengers are located within the seats 36, the operator will move the lever 62 to release the brake belt 57 from the drive 56 and then the clutch 54 will be thrown into operative position by the lever 55. Shaft 48 is now being revolved and likewise the shaft 41 through the intermeshing gears 46 and 47 are driven.

Since the pulleys 42 and 42^a are secured to the shaft 41 said pulleys will be revolved causing the cables 43 and 44 to revolve the grooved wheels 23 and cause rotation of the beam 16. Rotation of the beams will move the seats 36 through a circular path until the clutch 54 is thrown out and the device brought to rest by applying the brake belt 57 to the drum 56.

Due to the fact that the cable 43 is wound over its respective pulleys 42 in a different manner from the winding of the cable 44 on its respective pulleys and the wheels 28, alternate units included in the beams 16 and the seats 36 will have a different direction of rotation from the units which are driven by the grooved wheels 42^a and the cable 44.

It will be noted that by this construction all of the seats pass through substantially the same circular path although alternate seats move in the opposite direction. These seats, however, are substantially in the same horizontal planes at all times during the circular path and they will arrive at the loading platform at the same time for the discharge of passengers and for the loading of passengers.

While I have shown a single rod extending the length of the amusement, it will be appreciated that separate units may be employed in connection with each of the grooved wheels 24 in order to increase the tension on the cables 43 or 44.

I claim:

An amusement device comprising a shaft, a plurality of units mounted for rotation on the shaft, each unit including a hub section, a plurality of beams secured to and radiating from the hub section, a plurality of bars secured between the beams adjacent the hub section and disposed in the form of a rectangle, a grooved wheel connected to the bars and cooperating with said bars for rigidly holding the beams together, rods connected between the beams adjacent the ends of said beams and in parallel relation with the bars for aiding in reinforcing the beams and means for revolving the wheels.

PHILIP S. McLAUGHLIN.