

W. B. LEONARD.
AMUSEMENT DEVICE.

APPLICATION FILED JULY 15, 1908.

Patented Nov. 10, 1908.

2 SHEETS—SHEET 1.

903,208.

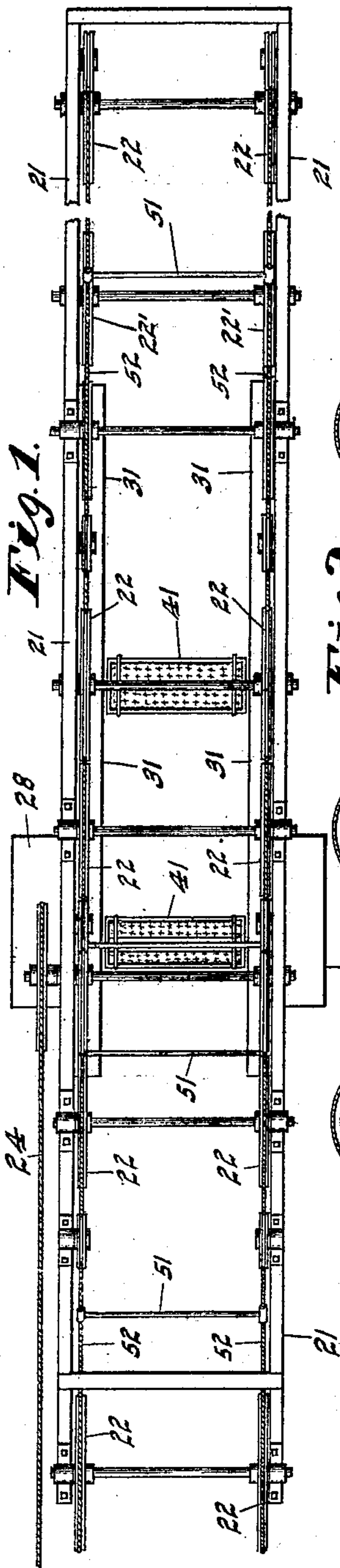


Fig. 1.

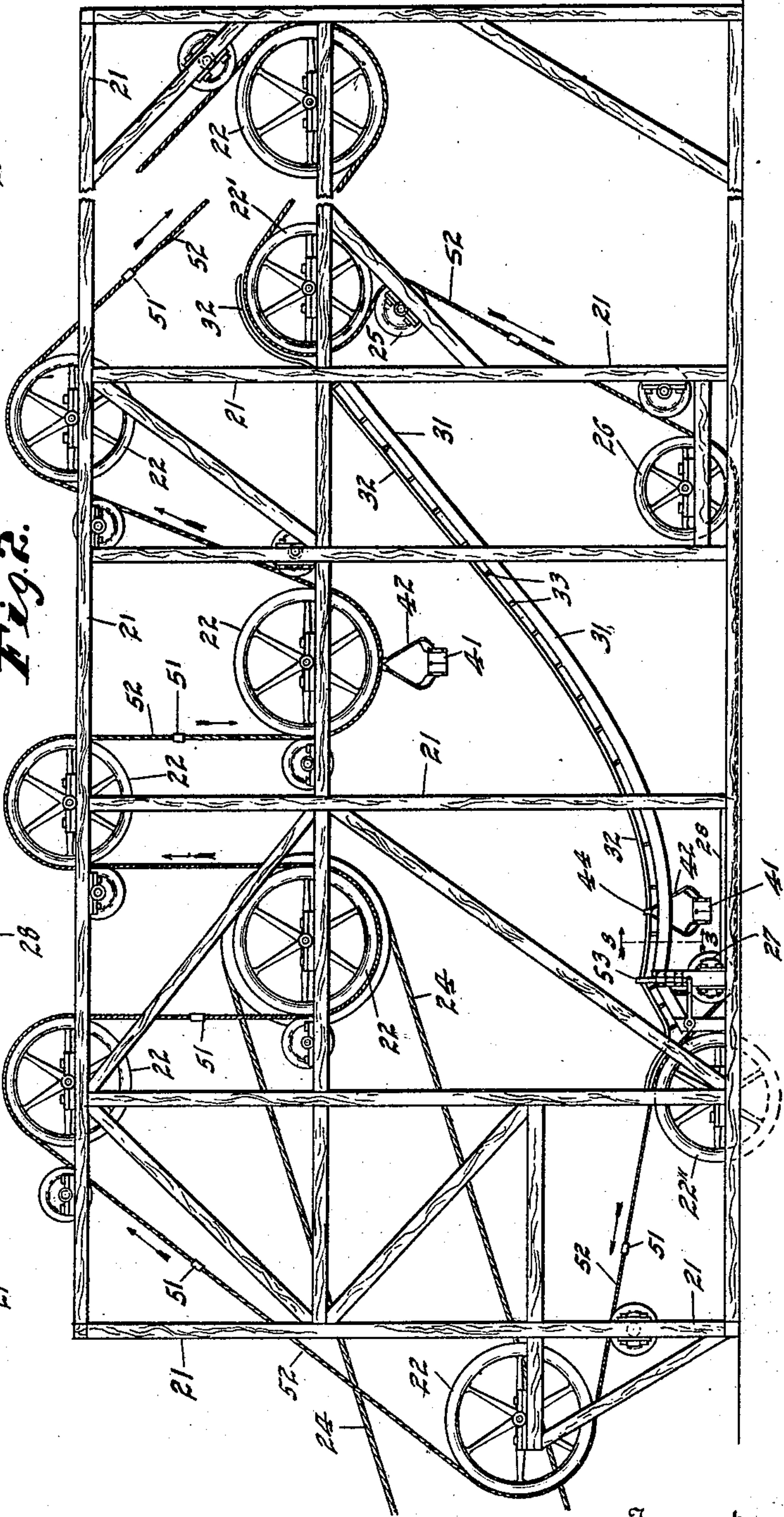


Fig. 2.

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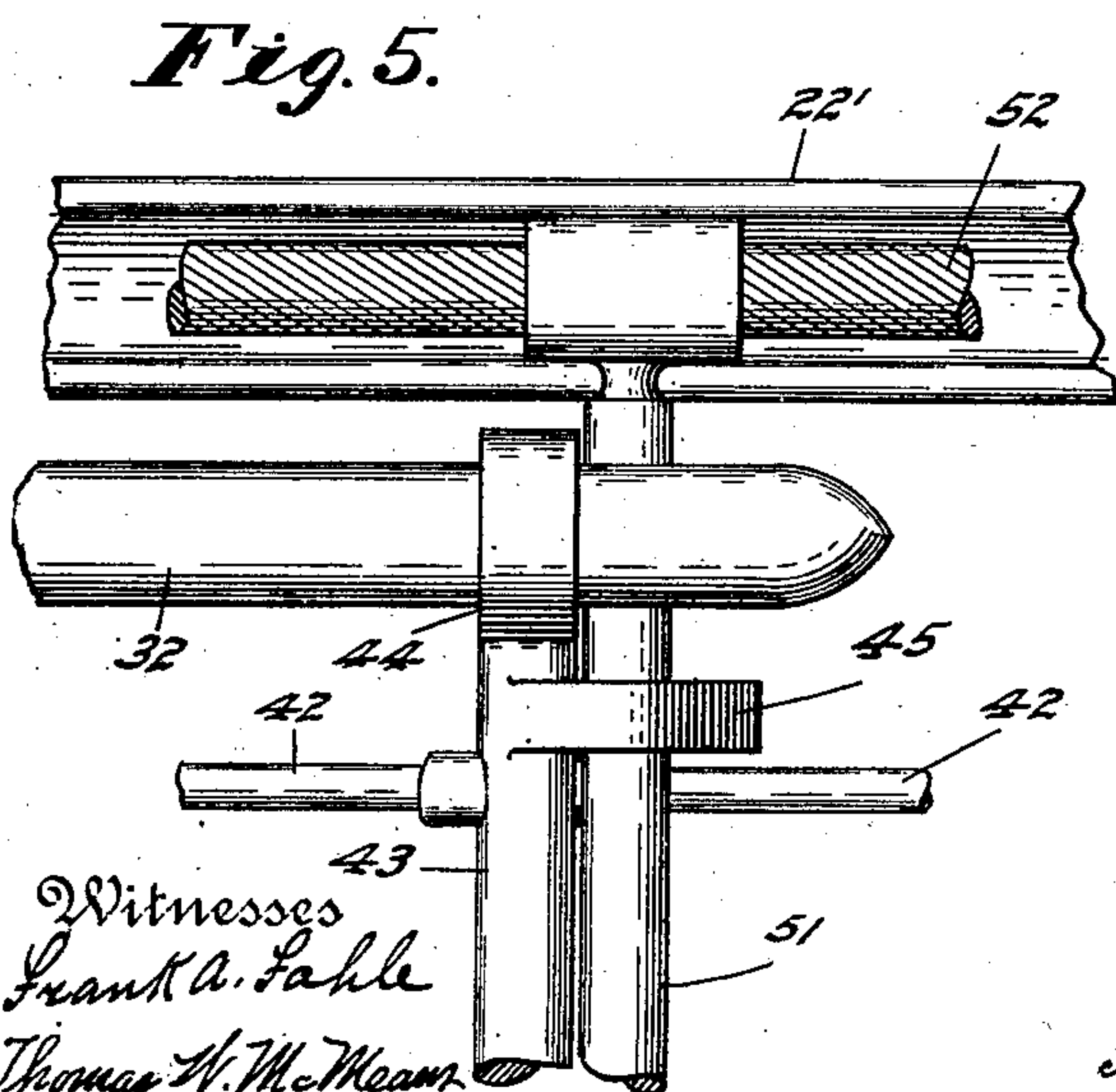
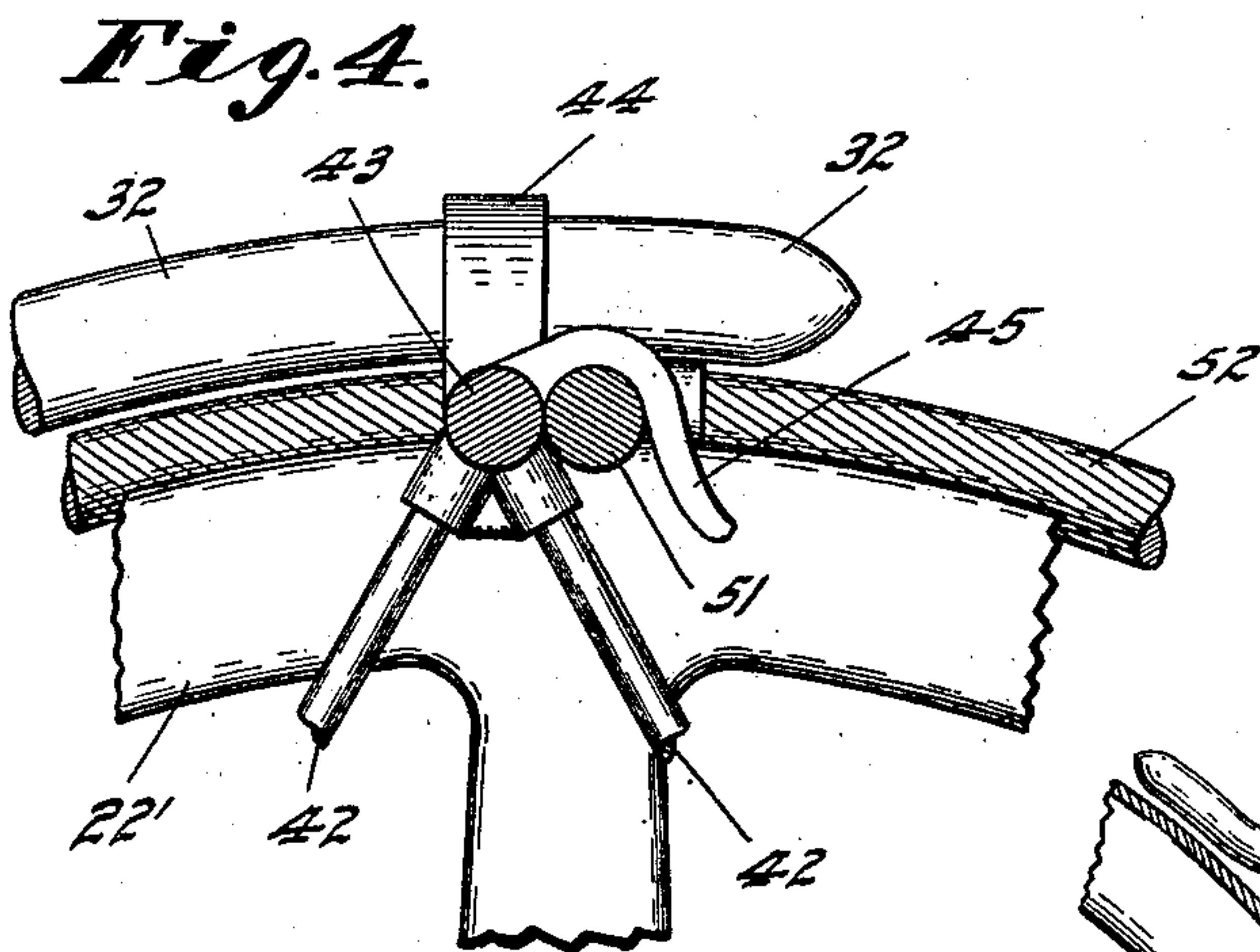
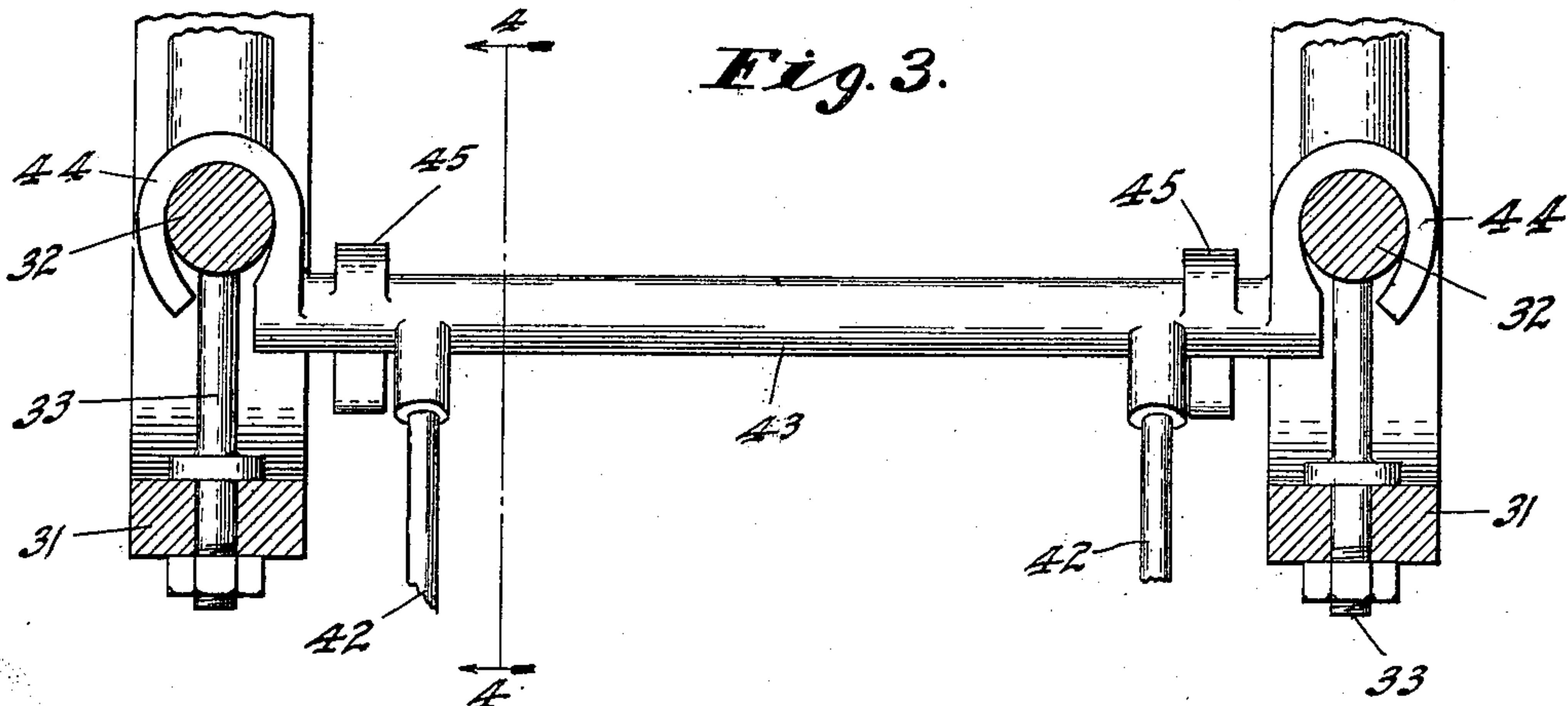
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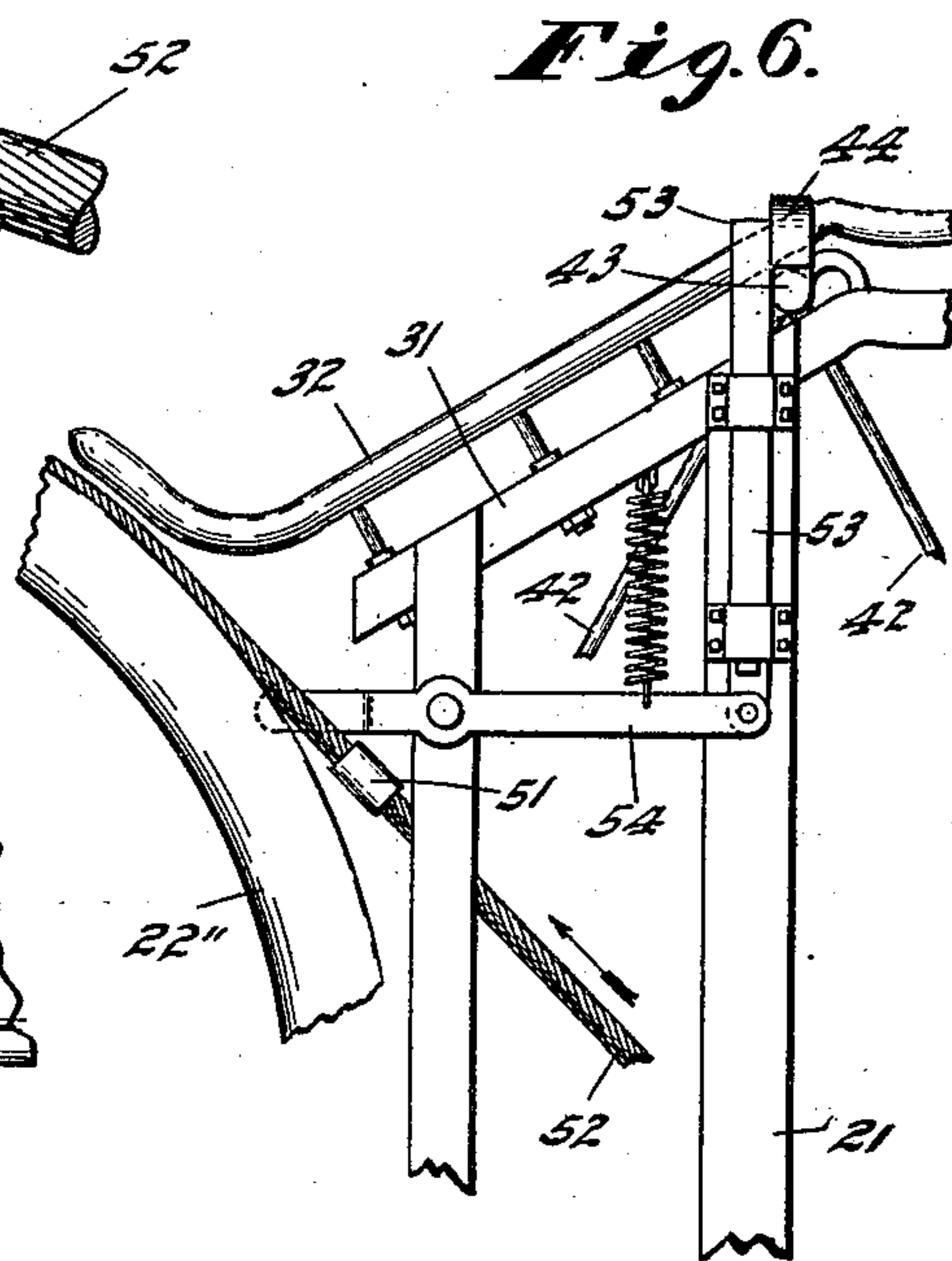
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2 SHEETS—SHEET 2.

903,208.



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UNITED STATES PATENT OFFICE.

WILLIAM B. LEONARD, OF CHICAGO, ILLINOIS.

AMUSEMENT DEVICE.

No. 903,208.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed July 15, 1908. Serial No. 443,574.

To all whom it may concern:

Be it known that I, WILLIAM B. LEONARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Amusement Devices, of which the following is a specification.

My present invention consists in certain improvements upon that forming the subject-matter of my application Serial No. 414,882 filed Feb. 8, 1908, whereby I am enabled to automatically disengage the cars from the carrier, stop the same, load and unload them, and then reengage said cars with the carrier, and still permit the carrier itself to have continuous motion.

Said invention consists in combining with the carrier and its cars an inclined chute down which the cars may travel when disengaged from the carrier to a point convenient to the place where loading and unloading takes place, and in providing suitable means for effecting a disengagement of the cars from the carrier when they reach a point adjacent to the upper end of said chute.

It further consists in means for reengaging the cars with the carrier after said cars have been loaded, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a top or plan view of an amusement device embodying my said invention, the frame thereof being broken to indicate extension thereof to any required length, which I design to use substantially as illustrated in Fig. 1 of my said former application; Fig. 2 a side elevation of the same; Fig. 3 a detail sectional view on a considerably enlarged scale illustrating the construction of those parts by means of which the car is immediately connected to the carrier, and to the guide rails on the chute, said view being taken at the point indicated by the dotted line 3 3 in Fig. 2 as seen when looking in the direction indicated by the arrows from said dotted line; Fig. 4 a detail sectional view as seen when looking in the direction indicated by the arrows from the dotted line 4 4 in Fig. 3, but showing the car-supporting devices at the top of the chute where they begin to engage with the track-rails of said chute, instead of near the bottom of the chute as in said Fig. 3; Fig. 5 a top or plan view of

the parts shown in Fig. 4, and Fig. 6 a detail elevation, on an enlarged scale, of the portion of the chute and immediately adjacent parts at the lower end near the wheel 22".

The framework 21 is or may be similar in character and construction to that illustrated in my said former application. Upon it are bearings for shafts of wheels 22, 22' and 22'', over which an endless carrier runs, said carrier being driven, as by a belt 24, from some suitable source of power (not shown). The two wheels 22' and 22'' are adjacent to the ends of the chute previously mentioned (presently to be more fully described), and the carrier during that portion of its travel between said two wheels runs below said chute, passing first behind the guide wheel 25, thence under a wheel 26 (similar to the wheels 22), thence under a guide pulley 27, and thence onto the wheel 22'' at the lower end of the chute. It will thus be seen that the carrier during this portion of its travel carries no cars; and for a portion of the time is below the floor or platform 28.

Extending between the wheels 22' and 22'' is the chute previously referred to consisting of suitable supporting beams 31 and track-rails 32 adapted to receive the hooked ends on the transverse rod from which the car body is suspended. Rails 32 are shown as round smooth rods supported upon standards 33 from the timbers 31. These standards are of considerably smaller diameter than said rod, in order that the hooks on the ends of the car-supporting bar may pass them, although the openings in said hooks are less than the diameter of said rail. The rail 32 extends from the upper side of wheel 22' for a short distance substantially parallel with the periphery of said wheel, and thence downwardly on a curved incline to the vicinity of the wheel 22'', reaching a point substantially on a level, thence downwardly on an incline to close to the periphery of said wheel 22'', and thence for a short distance parallel with the periphery of said wheel.

A car 41 is carried by hangers 42 from a transverse bar 43, the ends of which develop into hooks 44 adapted to embrace the track-rails 32 of the chute. These hooks 44, as before stated, extend more than half way around the track-rails 32, and the openings in said hooks are less than the diameter of said rails. When said hooks have passed

onto said rails, therefore, they are unable to escape therefrom until they reach the ends thereof. Upon the same bar 43 are comparatively long hooks 45 which are adapted to pass over transverse bars 51 on the cables 52 of the endless carriers. Said cars are thus suspended from said carrier bars, except when disengaged therefrom and carried by the rails 32.

At the lower end of the chute are stops 53 mounted on pivoted arms 54 which extend out into the path of the carrier bars 51. These stops are just below the top of the final incline of the chute, and when said stops are withdrawn, by the action of the carrier bars 51 coming in contact with the free ends of levers 54, the car whose bar 43 is immediately against said stops will be permitted to descend said final incline into position where its hooks 45 may be engaged by the carrier bar 51 which next reaches that point. The car will then be carried on out of engagement with rails 32, and thence along its predetermined course.

The operation is as follows: The apparatus being erected and in condition for use, and equipped with a suitable number of cars, that one of said cars which is positioned near the lower end of the chute, just above its final short inclined portion, is loaded with passengers. The transverse bar 51 of the traveling carrier 52 which next arrives at that point will operate to release the stops, and the car may then pass down to where the bar 51 will engage with hooks 45 and carry the car forward. This operation may be repeated as long as there are passengers to be accommodated; and the cars are sent out, in succession, in such numbers, and at such distances apart, as may be desired. Each loaded car, after having made a complete circuit, and after having arrived at the top of the chute, will engage with the track-rails 32 of said chute, as already explained, and be thereby disengaged from the carrier, while said carrier itself continues an uninterrupted movement. The cars can thus be loaded and unloaded without stopping the machinery. As each car is preferably provided with two doors, one at each end, the loading and unloading can be performed very quickly, the departing passengers leaving by one end of the car and the incoming passengers entering it by the other.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. The combination, in an amusement device, of an endless traveling carrier, a chute having suitable track-rails extending between two points in the path of said carrier, cars adapted to be detachably attached to said carrier, and means for detaching the cars from the carrier when said cars arrive at

the upper end of the chute and delivering them onto the track-rails of the chute.

2. The combination, in an amusement device, of an endless traveling carrier, a chute having suitable track-rails extending between two points in the path of said carrier, cars adapted to be detachably attached to said carrier, and means for detaching the cars from the carrier when said cars arrive at the upper end of the chute and delivering them onto the track-rails of the chute, said means consisting of open hooks adapted to engage with cross bars of said carrier, and other open hooks adapted to pass onto the track rails of the chute.

3. The combination, in an amusement device, of an endless traveling carrier, a chute having suitable track-rails extending between two points in the path of said carrier, cars adapted to be detachably attached to said carrier, and means for detaching the cars from the carrier when said cars arrive at the upper end of the chute and delivering them onto the track-rails of the chute, said chute being provided with a stop near its lower end, and an arm extending into the path of the carrier with which a cross-bar on said carrier will come in contact and be thereby operated.

4. The combination, in an amusement device, of an endless traveling carrier, a chute having suitable track-rails extending between two points in the path of said carrier, cars adapted to be detachably attached to said carrier, and means for detaching the cars from the carrier when said cars arrive at the upper end of the chute and delivering them onto the track-rails of the chute, said means consisting of open hooks adapted to engage with cross bars of said carrier, and other open hooks adapted to pass onto the track rails of the chute, the hooks which engage with the track-rails of the chute having openings less than the diameter of said track-rails whereby they are securely held onto said track-rails during the passage thereover.

5. The combination, in an amusement device, of an endless traveling carrier, a chute having suitable track rails extending between two points in path of said carrier, cars adapted to be detachably attached to said carrier, means for automatically detaching the cars from the carrier and delivering them to the track rails as they reach the upper end of said rails, and means for automatically re-attaching said cars to said carrier at the lower ends of said track rails.

6. The combination, in an amusement device, of an endless traveling carrier, a chute having suitable track rails extending between two points in path of said carrier, cars adapted to be detachably attached to said carrier, means for automatically detaching the cars from the carrier and delivering them

to the track rails as they reach the upper ends
of said rails, means for holding said cars sta-
tionary temporarily at the point of loading
and unloading, and means for automatically
5 re-attaching said cars to said carrier at the
lower ends of said track rails.

In witness whereof, I, have hereunto set

my hand and seal at Indianapolis, Indiana,
this eleventh day of July, A. D. one thousand
nine hundred and eight.

WILLIAM B. LEONARD. [L. s.]

Witnesses:

CHESTER BRADFORD,

THOMAS W. McMEANS.