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F. C. BAUER

TOY RAILWAY

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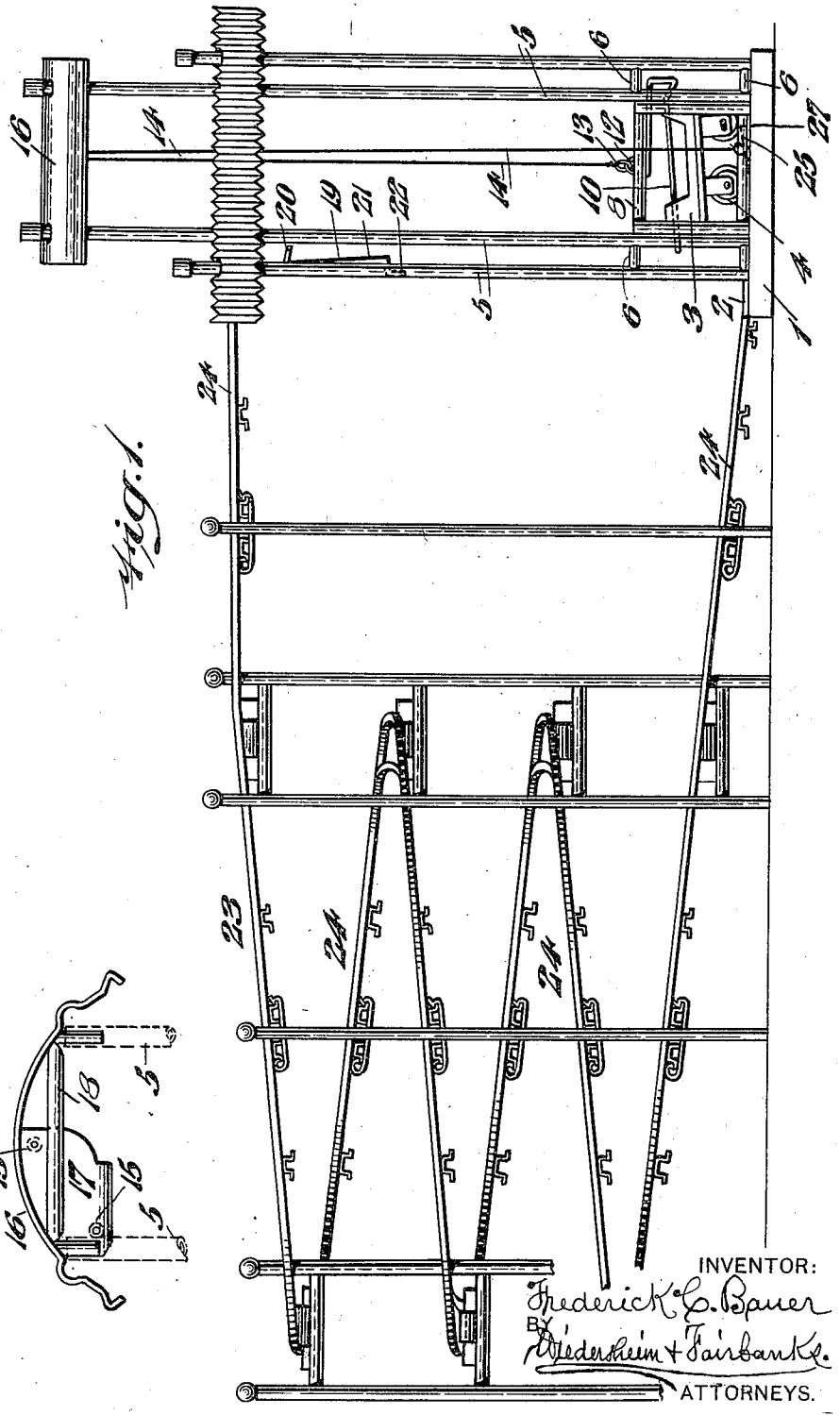

Fig. 1.

Fig. 4.

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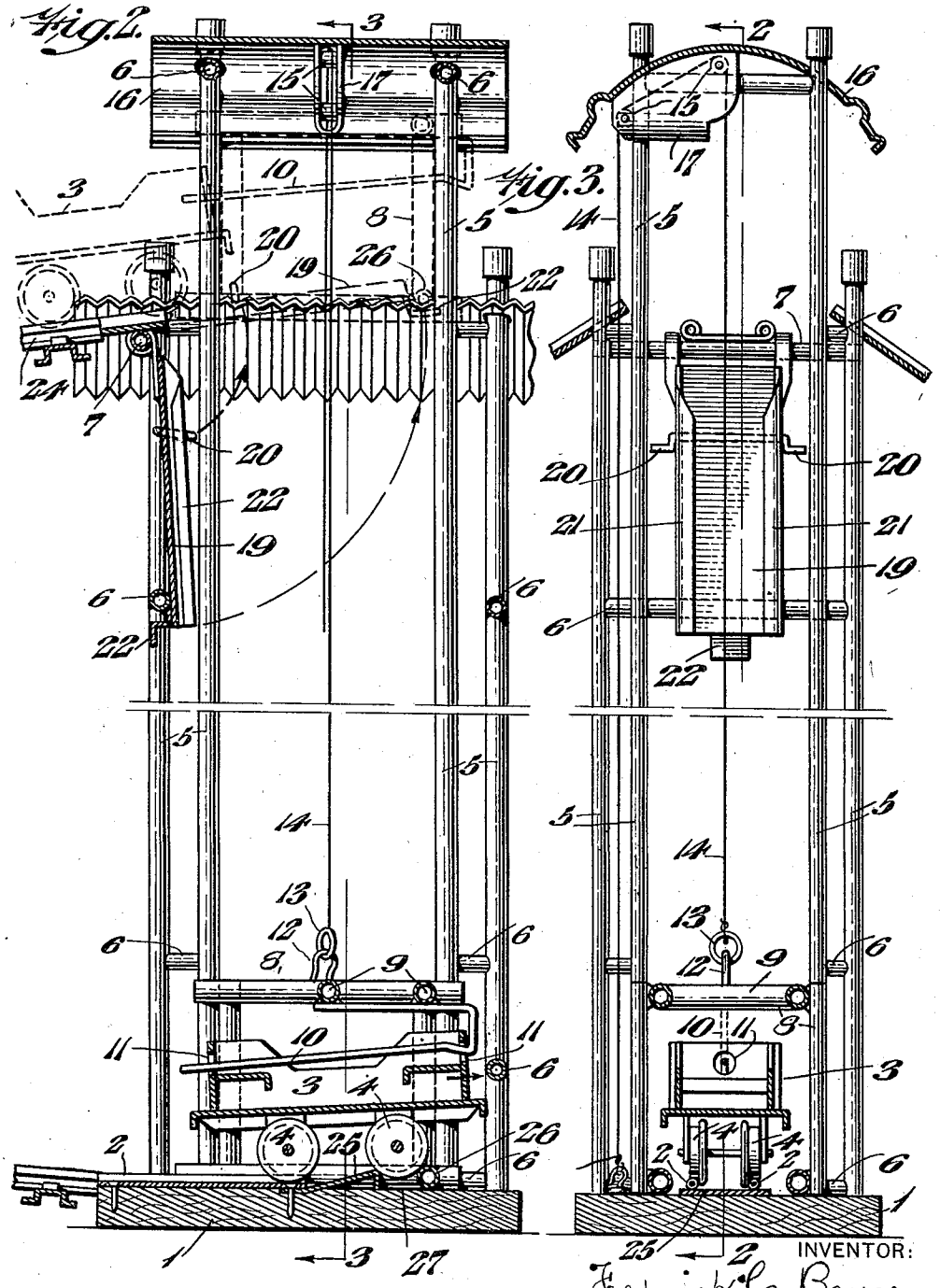

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UNITED STATES PATENT OFFICE.

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TOY RAILWAY.

Application filed June 20, 1923. Serial No. 646,528.

To all whom it may concern:

Be it known that I, FREDERICK C. BAUER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Toy Railway, of which the following is a specification.

My invention relates to a toy railway and embodies a railway, an elevator, a car, a standard on which said elevator is adapted to travel, and means on the standard for placing the elevator and consequently the car when raised adjacent to the upper terminal of the railway, whereby the car is automatically released from the elevator and thus directed upon the railway so as to cause the latter to leave the elevator and descend the railway.

It consists also of novel means for preventing the elevator from being improperly displaced from its lowermost and uppermost positions, and furthermore, of novel means for locking the car wheels when the car returns to its normal position.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific details shown and described, as long as they are within the scope of the claims.

Figure 1 represents a side elevation of a toy railway embodying my invention.

Figure 2 represents a partial side elevation and a central partial vertical section thereof on an enlarged scale on line 2—2 Figure 3.

Figure 3 represents a partial side elevation and a partial central vertical section thereof on line 3—3 Figure 2. Figure 4 represents a side elevation of a detached member thereof. Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings.

1 designates a base on which is supported the rails 2. 3 designates a car whose wheels 4 are adapted to run on said rails on the return motion of the car.

Rising from the base 1 is the plurality of standards or columns 5 which are connected by the braces 6 and 7 for strengthening purposes, said standard forming what I denominate a tower.

8 designates an elevator for the car, the top, bottom and side pieces of the same being formed of metal, the said top pieces being connected by the cross bar 9 as a brace therefor.

Connected with said bar 9 is the upper limb of an elbow shaped hanger 10 the lower limb whereof is offset downwardly from the upper limb and is adapted to be passed freely through openings 11 in the end dashers of the car whereby the car is suspended from said hanger and so removably connected with the elevator and it is adapted to be raised by the latter, it being noticed that the elevator has on the top the hook 12 for the engagement of the ring 13 on the adjacent end of the cord or other flexible piece 14, which latter is passed around the pulleys or guides 15 on the roof 16 of the device, said roof being secured to the upper ends of the columns 5 in any suitable manner, said cord extending downwardly from said pulleys or guides whereby it may be conveniently grasped and operated so as to raise the elevator and with it the car. The other end of said cord 14 may be fastened to the base 1, as shown at the lower end of Figure 3, so as not to be displaced.

In order to prevent the cord from jumping from said pulleys or guides the latter have their sides inclosed by the sheath 17, the effect of which is evident.

In order to strengthen the roof 16 the same is formed arch shaped and has connected with its underside the cross bars 18 which brace said roof.

Mounted on the upper brace 7 of the standard is the gravitating platform 19 whose normal position is pendant at the adjacent portion of the standard of the tower. To the sides of said platform are secured the laterally projecting fingers 20 which are in the path of the ascending elevator, whereby the latter engages with said fingers and so raises the platform to a comparatively horizontal position, it being noticed that said platform has thereon the rails 21 on which the car 3 may be imposed as will be hereinafter more fully explained.

In order to limit the ascent of the platform its free end has secured to it the lip 22 which when the platform has reached its proper uppermost position, said lip abuts the brace 26 on the bottom of the elevator, see Figure 2, and so acts as a stop to the further elevation of the platform.

23 designates a spiral railway, the upper and lower terminals of the rails 24 of which adjoin the rails 2 on the base 1 and the rails 21 of the platform 19 respectively, thus forming a continuity of the several rails, said terminals being inclined downwardly as shown in Figure 1.

On the base 1 at the inner terminals of the rails 2 is a block forming the inclined plane 25, the vertical side of which forms a shoulder with which the adjacent wheels of the car may abut. Adjacent to said side is the stop piece 26 on the bottom of the elevator forming between them the recess 27 into which the adjacent wheels 28 of the car may drop and so lock said wheels and thereby limit the movement of the car on its return motion.

Should the momentum of the car be severe whereby it may jump the stop piece 26 its forward dasher may strike the adjacent brace 6 of the standards, see arrow Figure 2, as a stop and so prevent the car from leaving the elevator in the direction of said arrow.

The operation is as follows:—

The car being in normal position on the rails 2 on the base 1 and on the elevator the cord or chain 14 is operated whereby the elevator is raised and with it the hanger 11, and consequently the car.

The car rises with the elevator to the top portion of the tower and passes the inner side of the platform 19 when it strikes the fingers 20, thus raising the platform to a horizontal position slightly inclined to harmonize with the inclined direction of the terminals 24 of the rails of the spiral railway, see Figure 2. The rails 21 of the said platform are now beneath the car wheels and rise to the same so that the car is imposed thereon slightly inclined owing to the inclined position of the platform as above stated. Then the car by gravity runs down said rails 21 and is directed upon the upper terminals of the rails of the spiral railway, the body of the car having ridden freely on the hangers 10 and so slipping off of the same. The car now traverses the spiral railway and so reaches the lower terminals of the rails 24 when it reaches and runs upon the rails 2 of the base and is located in the elevator and threaded on the hanger 10 making its full return motion so that it is placed in position for the repetition of its ascent to the top portion of the tower, with the elevator, it being evident that when the car leaves the platform the elevator is released of the holding action of the cord 14, and so let go when it descends and the platform returns to its normal depending position the elevator then again reaching the base 1, when the car enters the same and the openings 11 in the latter are in register with the hanger 10 so that said openings pass over the hanger when the car is again connected with the elevator as best shown in Figure 1.

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

1. In a toy railway, a railway, an elevator, a car, a standard on which said elevator is adapted to travel, a movable platform mounted on said standard, means on said platform adapted to engage said elevator in the ascent of the latter whereby said platform is raised automatically transferring the wheels of the car from the elevator upon said platform and placing the wheels automatically in communication with the adjacent terminal of the railway.

2. In a toy railway, an elevator, a standard on which said elevator is adapted to travel, means for raising the elevator, a car removably carried by said elevator in the ascent of the latter, base rails on which said car is returned to normal position, a block on the base of the standard, a recess on an end of said block in which a wheel of a car on its return to said base may drop, and be thereby interlocked with a wall thereof.

3. In a toy railway, an elevator, means for raising the same, a car adapted to be carried by said elevator in the ascent of the latter and to be placed in communication with the adjacent end of the railway, base rails on which the car is returned to its normal position, and a shoulder and stop members adjacent to said rails forming a recess into which the wheels of the car may interlockingly enter.

4. In a toy railway, an elevator, a standard on which said elevator is guidable, means on said elevator and standard for raising the former, a car, and a hanger on said elevator having a limb adapted to occupy freely the body of said car to raise the latter with the elevator and to automatically release the car when raised to its discharge position at the adjacent end of the railway.

5. In a toy railway, an elevator, a standard on which said elevator is vertically guidable, means on said elevator and standard for raising the former, a car on said elevator, removably connected therewith, a movable platform mounted on said standard adapted to be engaged by the elevator in its ascent to raise said platform and place the car in a discharge position in register with the adjacent end of the railway.

6. In a toy railway, an elevator, a standard on which the elevator is vertically guidable, means on the elevator and standard for raising the former, a car on said elevator removably connected therewith, a movable platform mounted on said standard adapted to be engaged by the elevator in its ascent to raise said platform and

place the car in a discharge position in register with the adjacent end of the railway, a lip member on said platform, and a stop member on the elevator, the latter named member being adapted to engage the former named member and thereby limit the ascent of said platform in the discharge position of the car thereon.

7. In a toy railway, an elevator, a standard on which the elevator is vertically guidable, means on the elevator and standard for raising the former, a car on said elevator, and an offset hanger connected with said elevator, the dashers of said car having therein openings through which said hanger is passed freely, thus connecting the car with the elevator and permitting the car to be slidable on said hanger and thereby automatically detached from the elevator when the latter reaches the elevated end of the railway.

8. In a toy railway, a railway, an elevator, a standard on which said elevator is adapted to travel, a car adapted to be carried removably on said elevator, a movable platform in the upper portion of said standard adapted to be engaged by said elevator in the ascent of the latter and thereby place the car in position on said platform and automatically in communication with the upper portion of the railway when it automatically releases itself from the elevator and descends on said platform to the railway and continues its descent on the latter.

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Witnesses:
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