No. 690,814. Patented Jan. 7, 1902.

A. M. ACKLIN.

CAR CHECKING DEVICE.

(Application filed June 27, 1901.)

(No Model.)

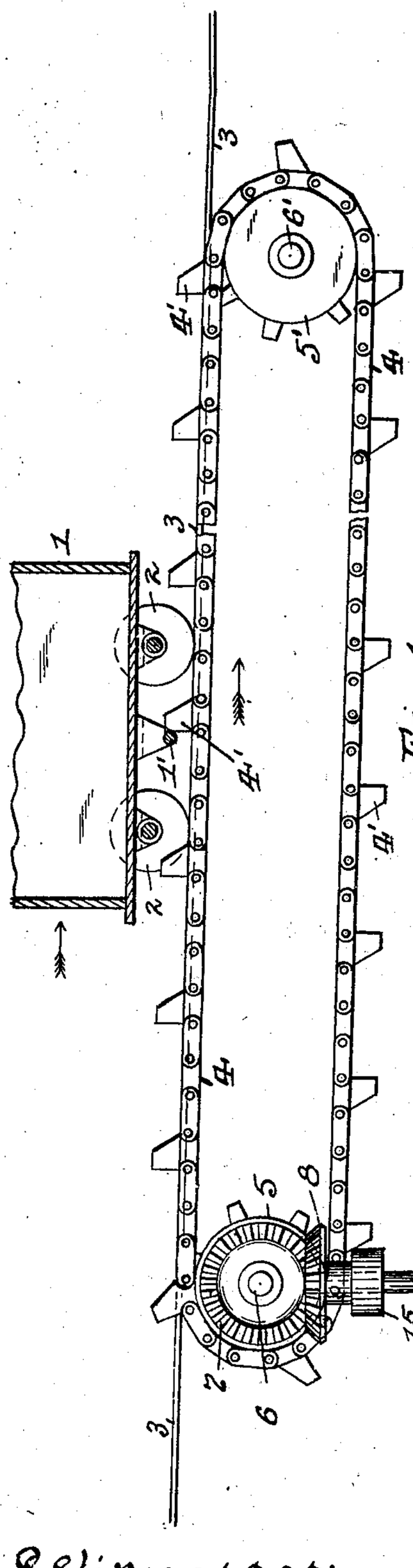

Fig. 1.

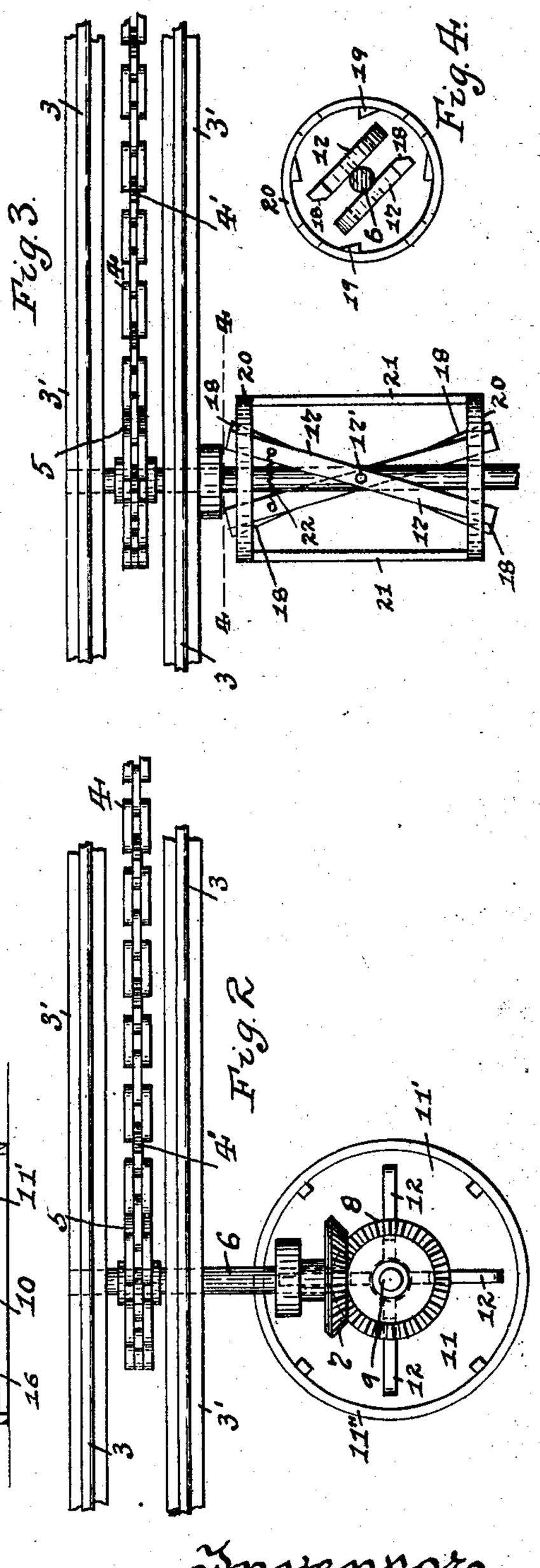

Fig. 3.

Fig. 4.

Fig. 2.

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UNITED STATES PATENT OFFICE.

ALFRED M. ACKLIN, OF PITTSBURG, PENNSYLVANIA.

CAR-CHECKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 690,814, dated January 7, 1902.

Application filed June 27, 1901. Serial No. 66,224. (No model.)

To all whom it may concern:

Be it known that I, ALFRED M. ACKLIN, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Car-Checking Devices; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a car-checking device, and has for its object to provide a cheap and simple apparatus for engaging with the moving car which will reduce the speed of the same and permit it to move along at such reduced speed.

My invention consists, generally stated, in the novel arrangement, construction, and combination of parts, as hereinafter more specifically set forth and described, and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved car-checking device, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of my improved car-checking device, showing some of the parts in section. Fig. 2 is a top view of the same. Fig. 3 is a top view of another form of the device; and Fig. 4 is a sectional view on the line 4 4, Fig. 3.

Like symbols of reference herein indicate like parts in each of the figures of the drawings.

1 represents the car, which is adapted to travel by means of its wheels 2 upon the tracks 3, and preferably located between such tracks 3 is the endless chain 4, which passes around sprocket-wheels 5 5′, mounted on shafts 6 6′, journaled to or within the beams 3′, supporting the tracks 3, and such chain 4 is preferably hung at a slight incline and is provided with the hooks or projections 4′ thereon, which are adapted to engage with a pin or bar 1′ on the car 1.

Mounted around the shaft 6 is the gear-wheel 7, which is adapted to engage or mesh with another gear-wheel 8, mounted upon an upright shaft 9, which extends down and is supported within a pillow-block 10, secured to the bottom 11′ of a tank 11. The tank 11 is filled with oil, water, or other suitable liquids with which fan or flutter-wheel blades 12, formed on arms 13, secured around the shaft 9 by a collar 14, are adapted to engage, while an ordinary friction-clutch 15 is mounted around the shaft 9, which may slip around said shaft and relieve the arms or blades 12 of the sudden jar they would otherwise get when the car strikes the chain, as well as preventing the too-sudden checking of the car in striking the chain. Cleats 16 are secured to the bottom 11′ and sides 11″ of the tank 11 for resisting the movement of the liquid therein when the shaft 9 is rotating the blades 12.

The use and operation of my improved car-checking device is as follows: The car 1 having started along the tracks 3 upon reaching the end of the chain 4 adjacent to the sprocket-wheel 5 will be caught by one of the hooks or projections 4′ on said chain 4 striking or coming in contact with the pin or bar 1′ on said car 1, which will cause the chain 4 to move along with said car 1 around the sprocket-wheels 5 5′, and so check or reduce the speed of said car. As said chain 4 is moved along by the engagement of the bar 1′ on the car 1 engaging with one of the projections 4′ on said chain, as shown in Fig. 1, the shafts 6 6′ will be rotated, and the rotation of the shaft 6 will cause the rotation of the shaft 9 through the gear-wheels 7 and 8, which will revolve the blades 12 on said shaft 9 and within the liquid of the tank 11, so that said blades 12 will act to prevent the too-rapid movement of the chain 4 engaging with the car 1, and the cleats 16 within the tank 11 will act to restrict the movement of the liquid within the tank and assist the blades 12 in preventing the too-rapid movement of the chain and car. The car 1 and chain 4 will continue their joint traveling movement together, with the projection 4′ engaging with the bar 1′, and the blades 12 will engage with the liquid in the tank 11 until the engaging projection 4′ starts to travel with the chain 4 around the sprocket-wheel 5′ on the shaft 6′, which will free said engaging projection 4′ from the bar 1′ and allow the car 1 to continue its movement along the portion of the tracks 3 beyond the chain 4. After this car is thus

freed from the chain 4 the said chain and blades 12 will stop their movement until the next car moving along the tracks 3 is caught by one of the projections 4′ on said chain 4 when said car is adjacent to the sprocket-wheel 5′, which will again cause the movement of the chain by the car and the blades 12 to operate, as before described.

If desired, the blades 12 and the liquid-tank 11 can be dispensed with and the shaft 6 be provided with swinging arms 17, such as are shown in Figs. 3 and 4, these arms 17 being pivoted to said shaft 6 at or about their centers, as at 17′, and their ends provided with inclined faces 18, which are adapted to swing out by centrifugal force as the shaft 6 is rotated and engage with inclined faces 19, formed on rings 20 and supported by a frame 21 as said arms 17 are revolved, and so restrict the movement of said shaft 6 and the chain 4 when a car is engaging with and moving along with said chain, while a spiral spring 22 can be connected between said arms 17 for holding said faces 18 out of engagement with the faces 19 when the apparatus is at rest.

It will be evident that the chain can be placed upon either side of the tracks and engage with the car, if desired, and a rope having projections thereon used, if desired. It will also be evident that the blades can be made sufficiently large, so as to operate in the open air and so dispense with the liquid-tank, and that various other modifications and changes can be made in the construction and design of the various parts without departing from the spirit of the invention or sacrificing any of its advantages.

It will thus be seen that my improved car-checking device is cheap and simple in its construction and operation, so that by its use the movement or speed of the cars will be checked or reduced, but not entirely stopped, in the progress along the tracks. The device will prevent injury to the cars and will not get out of order, as the parts are simple and durable and will operate easily, quickly, and automatically. The device will enable a car to be let down a comparatively steep incline without the use of an engine or motor for moving the chain.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a car-checking device, the combination of a car, an endless chain, and a succession of hooks or projections on said chain adapted to engage with said car to automatically move said chain and retard the movement of said car.

2. In a car-checking device, the combination of a car, an endless chain, and a succession of hooks or projections on said chain extending throughout the entire length of the same and adapted to engage with said car to automatically move said chain and retard the movement of the car.

3. In a car-checking device, the combination of a car, an endless chain adapted to be moved in one direction, and a succession of hooks or projections on said chain adapted to engage with said car to automatically move said chain and retard the movement of said car.

4. In a car-checking device, the combination of a car, and an endless chain having a series of hooks or projections thereon adapted to engage with said car to automatically move said chain and retard the movement of said car, said chain being adapted to receive and check a car, and while so doing be in position to receive and check another independent car.

5. In a car-checking device, the combination of a car, an endless chain having a succession of hooks or projections thereon adapted to engage with said car to automatically move said chain and retard the movement of said car, and mechanism for restricting the movements of said chain and car.

6. In a car-checking device, the combination of a car, an endless chain having a succession of hooks or projections thereon adapted to engage with said car to automatically move said chain and retard the movement of said car, and mechanism for restricting the movements of said chain and car, said mechanism deriving its motive power from the moving car.

7. In a car-checking device, the combination of a car, an endless chain having a succession of hooks or projections thereon adapted to engage with said car to automatically move said chain and retard the movement of said car, and mechanism for restricting the movements of said chain and car, said mechanism deriving its motive power solely from the moving car.

8. In a car-checking device, the combination of a car, an endless chain having a succession of hooks or projections thereon adapted to engage with said car to automatically move said chain and retard the movement of said car, wheels mounted on shafts engaging with said chain, and mechanism connected to one of said wheel-shafts for restricting the movement of said chain and car.

9. In a car-checking device, the combination of a car, an endless chain having a succession of hooks or projections thereon adapted to engage with said car to automatically move said chain and retard the movement of said car, wheels mounted on shafts engaging with said chain, a gear-wheel on one of said wheel-shafts adapted to engage with a gear-wheel on another shaft, and mechanism connected to said second-named shaft for restricting the movement of said chain and car.

10. In a car-checking device, the combination of a car, an endless chain having a succession of hooks or projections thereon adapted to engage with said car to automatically

move said chain and retard the movement of said car, wheels mounted on shafts engaging with said chain, a gear-wheel on one of said wheel-shafts adapted to engage with a gear-wheel on another shaft, and blades or arms connected to said second-named shaft for restricting the movement of said chain and car.

In testimony whereof I, the said ALFRED M. ACKLIN, have hereunto set my hand.

ALFRED M. ACKLIN.

Witnesses:
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