

No. 675,347.

Patented May 28, 1901.

T. A. BOYERS.
CAR BRAKE.

(Application filed Mar. 29, 1901.)

(No Model.)

Fig. 1.

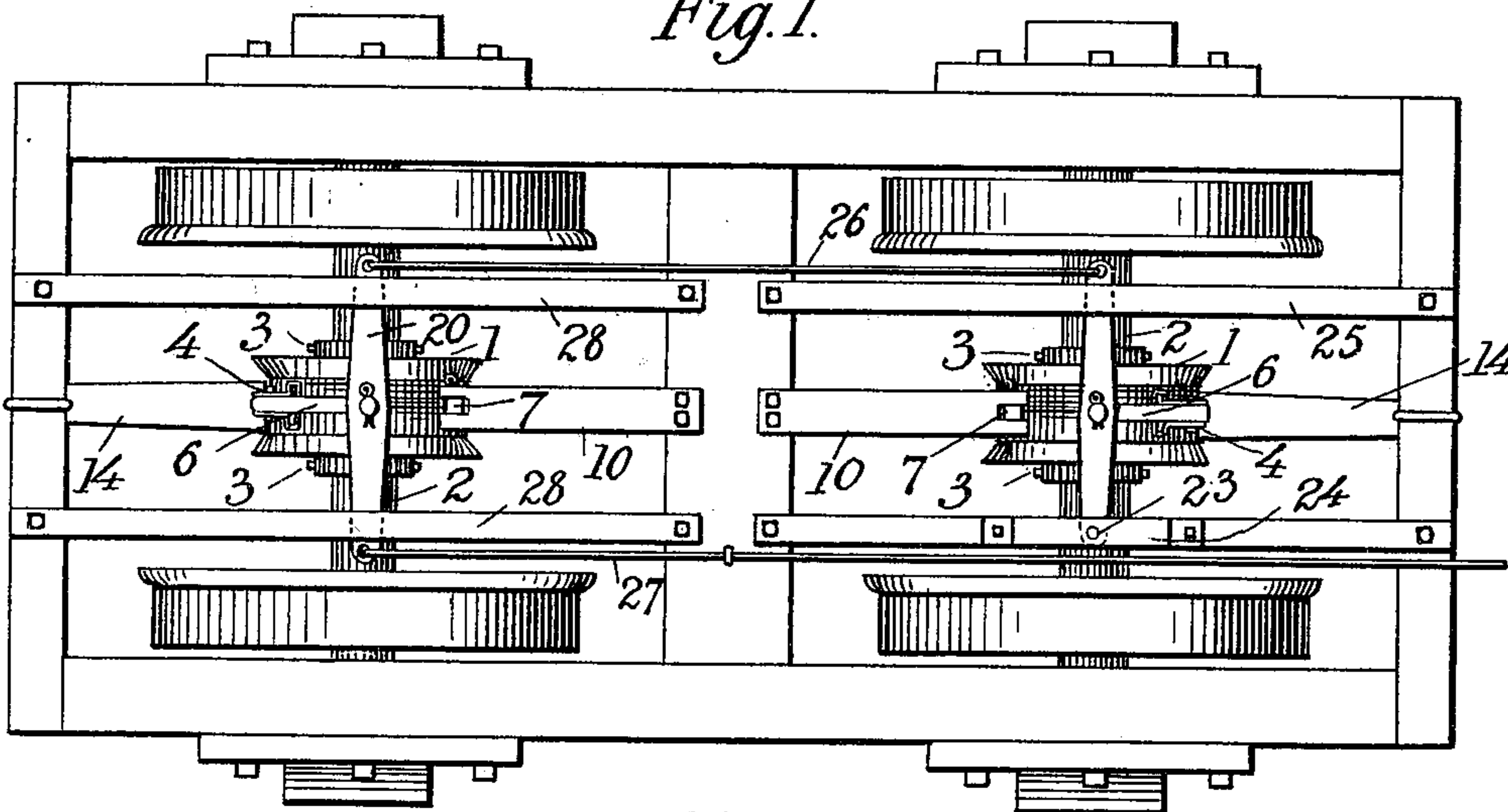


Fig. 2.

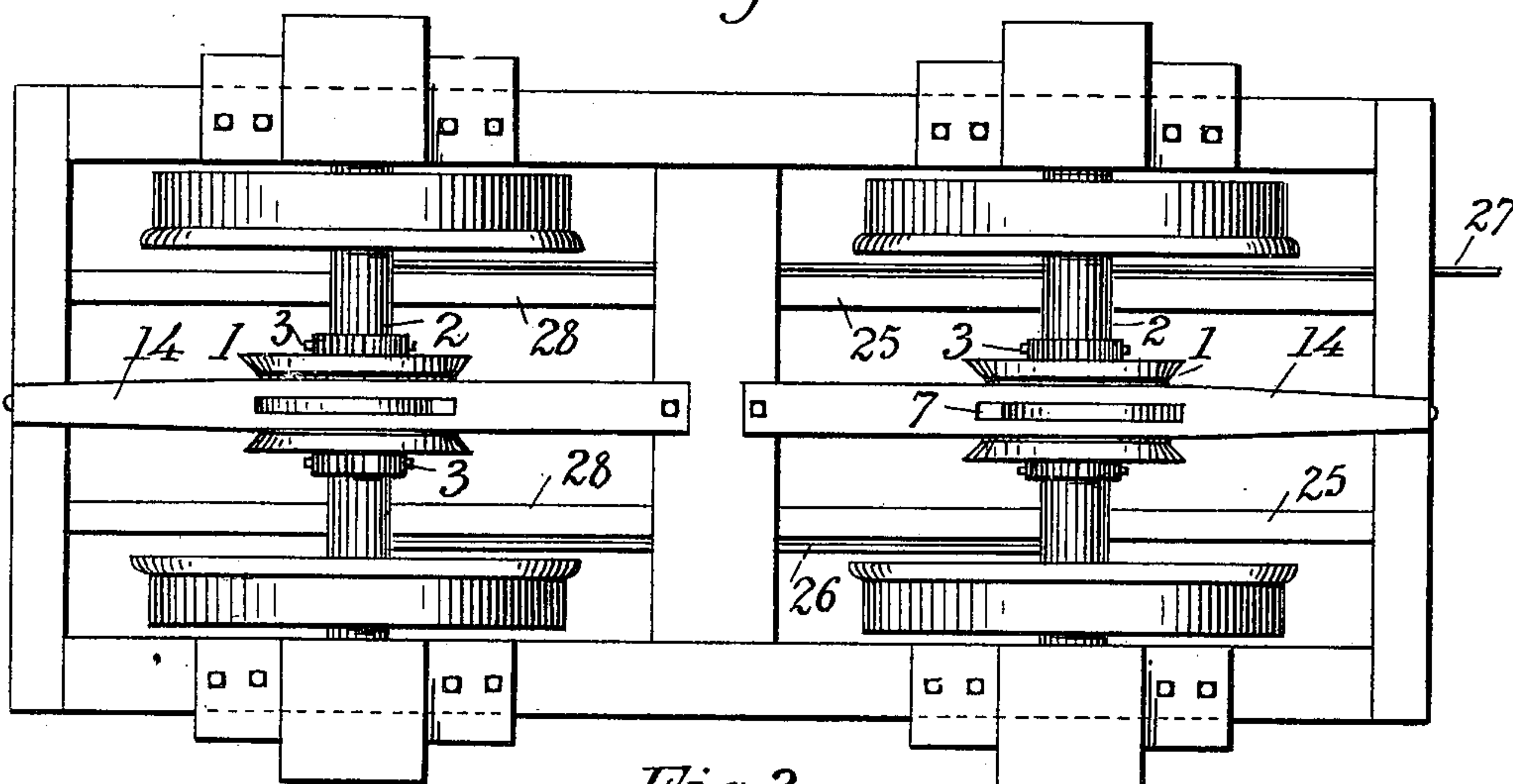
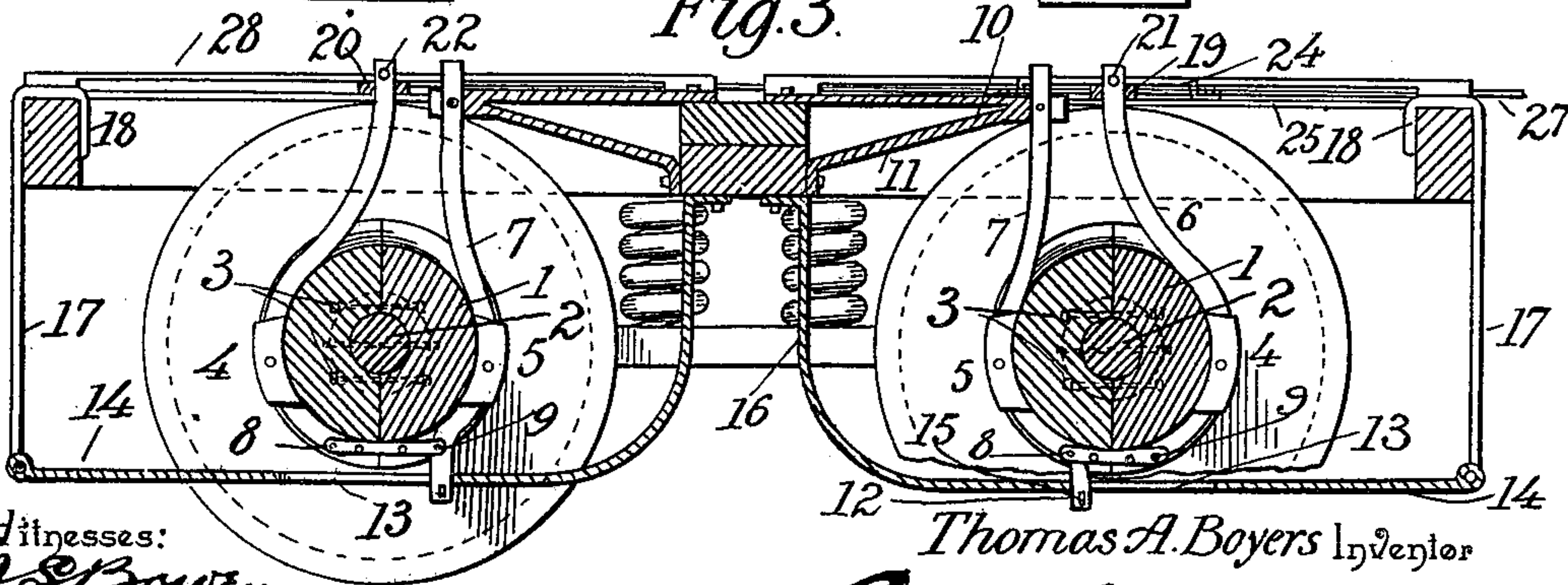


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS ALBERT BOYERS, OF GAINESVILLE, TEXAS.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 675,347, dated May 28, 1901.

Application filed March 29, 1901. Serial No. 53,496. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ALBERT BOYERS, a citizen of the United States, residing at Gainesville, in the county of Cooke and State of Texas, have invented a new and useful Car-Brake, of which the following is a specification.

The invention relates to improvements in car-brakes.

The object of the present invention is to improve the construction of car-brakes and to provide a simple, inexpensive, and efficient one adapted to be readily applied to both passenger and freight cars and designed to dispense with the transverse brake-beams usually employed for carrying the brake-shoes, and thereby prevent wrecks caused by the brake-beams falling upon the rails.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a plan view of a brake constructed in accordance with this invention and shown applied to a car-truck. Fig. 2 is a reverse plan view of the same. Fig. 3 is a longitudinal sectional view of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designate brake-wheels centrally arranged on car-axles 2 and constructed of sections connected at their hubs by bolts 3 or other suitable fastening devices to enable the brake-wheels to be readily applied to the axles after the car-wheels have been secured to the ends of the same. When the brake-wheels are to be applied to the car-axles during the course of construction of the latter, they may be constructed of a single piece similar to the car-wheels and pressed on the axles before the car-wheels are applied. The brake-wheels, which are flanged, may also be keyed or otherwise secured to the axles, and they are engaged by brake-shoes 4 and 5, secured to levers 6 and 7, arranged in an upright position and provided with curved portions conforming to the configuration of the brake-wheels. The levers 6 and 7 are adjustably connected at their lower ends by

straps or bars 8, provided with perforations and pivoted at one end to the levers 6 and detachably secured at the other end by means of a key 9 or other suitable fastening device to the lever 7. The key 9 is adapted to be arranged in any of the perforations to lengthen and shorten the connection between the lower ends of the levers to enable the proper clamping action to be obtained.

The lever 7 is pivoted at its upper end in a bifurcation of a bracket 10, secured to and extending horizontally from the central portion of the truck, as clearly shown in Fig. 3, and consisting, preferably, of a horizontal top portion and an inclined lower portion or brace 11. The lower end 12 of the lever 7 extends through a slot 13 of a guide 14 and is provided with a transverse key 15, extending across the slot 13 and adapted to prevent the lower end of the lever from being drawn upward out of the guide should a sudden application of the brake be made in an emergency. The guide 15, which is substantially L-shaped, has its vertical portion 16 secured to the central portion of the truck, and its horizontal slotted portion extends beneath the brake-wheel and is supported by a hanger 17, consisting of a rod hinged at its lower end to the guide and provided at its upper end with a hook 18, engaging one of the end bars of the truck.

The upper ends of the outer levers 6 are connected with the centers of transverse levers 19 and 20, provided with central apertures for the said levers 6, which are provided with keys 21 and 22 for retaining them in the said apertures. The lever 19 is fulcrumed at its end 23 on a horizontal supporting-bar 24, and it extends transversely of the truck, and its other end is arranged between a pair of horizontal guide-bars 25 and is connected by a rod 26 with one end of the lever 20, and the other end of the latter is connected by a rod 27 with the operating mechanism. The ends of the transverse lever 20 are supported by horizontal guide-bars 28, arranged in pairs and located at opposite sides of the center of the truck. The brake may be connected with any suitable operating mechanism and is designed to be operated in the usual manner, and it will enable a maximum clamping effect to be obtained

from a minimum amount of power. The brake is designed to be mounted on the trucks of passenger-coaches, similar to the ordinary brake, and it may be hung from the body of a freight-car. It is adapted to dispense with the transverse brake-beams and numerous other parts usually employed with the car-brakes of the ordinary construction, and it will prevent the many accidents resulting from brake-beams falling upon the rails.

The brake-wheels are provided with beveled flanges, which are adapted, should the brake-shoes have any lateral play, to direct or guide such brake-shoes into engagement with the central portions of the brake-wheels. By this construction considerable lateral play is permitted without liability of the brake-shoes becoming disengaged from the brake-wheels.

What I claim is—

1. In a car-brake, the combination with a brake-wheel designed to be mounted on an axle, the upright levers arranged at opposite sides of the brake-wheel and provided with means for engaging the same and connected at their lower ends, one of the levers being fulcrumed on a support, a guide receiving the lower end of such lever, and operating mechanism connected with the upper end of the other lever, substantially as described.

2. In a car-brake, the combination of a brake-wheel, upright levers provided with means for engaging the brake-wheel and connected at their lower ends, one of the levers being fulcrumed at its upper end, the guide-bar provided with a slot receiving the lower end of one of the levers, and means for retaining the same in the slot, substantially as described.

3. In a car-brake, the combination of a brake-wheel, a bracket, upright levers embracing the brake-wheel and provided with means for engaging the same and connected at their lower ends, one of the levers being fulcrumed on the bracket, the guide-bar having a horizontal portion extending beneath the brake-wheel and provided with a slot receiving the lower end of one of the levers, and a fastening device retaining such lever in the slot, substantially as described.

4. In a car-brake, the combination of a brake-wheel, the upright levers provided with means for engaging the brake-wheel, the

straps or bars secured to the lower end of one of the levers and adjustably connected to the other lever, and a guide receiving the lower end of one of the levers, substantially as described.

5. In a car-brake, the combination with a truck, of a brake-wheel mounted on one of the axles, a bracket secured to and extending from the center of the truck, upright levers provided with means for engaging the brake-wheel, and connected at their lower ends beneath the same, one of the levers being fulcrumed on the bracket, the approximately L-shaped guide-bar secured at its top to the center of the truck and provided with a slot receiving the lower end of one of the levers, a hanger connected with the outer end of the guide-bar and provided at its top with a hook for engaging the truck, and operating mechanism, substantially as described.

6. In a car-brake, the combination of a brake-wheel, upright levers provided with means for engaging the brake-wheel and connected beneath the same, one of the levers being provided at its lower end with an extension, an approximately L-shaped guide-bar having a slot or opening receiving the extension of the lever, a bracket supporting one of the levers, and operating mechanism connected with the other lever, substantially as described.

7. In a car-brake, the combination with a truck, of brackets extending from the center of the truck, brake-wheels, levers 6 and 7 provided with means for engaging the brake-wheels, the levers 7 being fulcrumed on the brackets, means for connecting the lower ends of the levers, guides extending from the center of the truck and receiving the lower ends of the levers 7, transverse levers connected with the upper ends of the levers 6, said transverse levers being connected with each other, operating mechanism, and horizontal bars mounted on the truck and supporting the transverse levers, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS ALBERT BOYERS.

Witnesses:

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SAM B. LANINS.