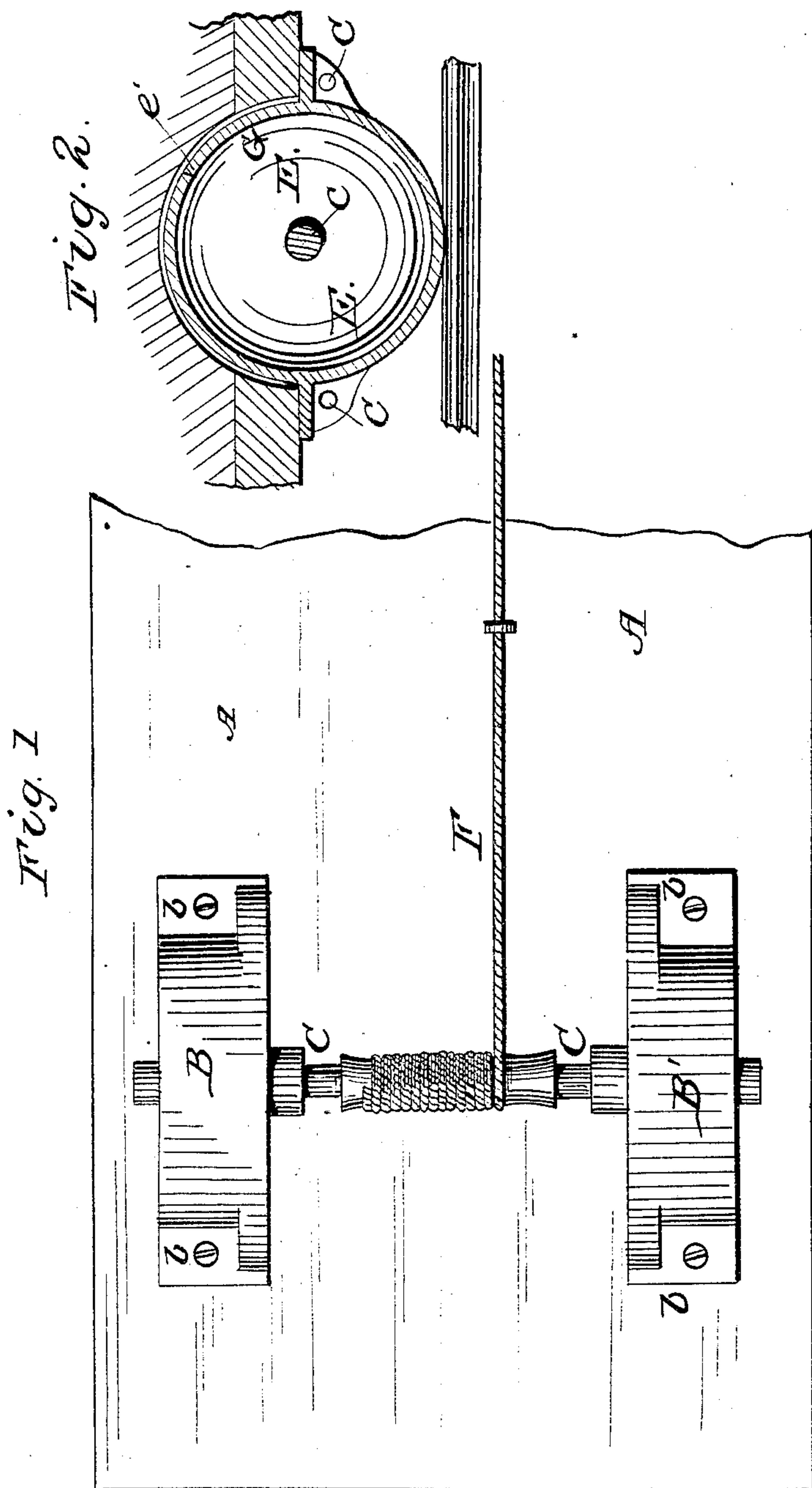


W. P. ANDERSON.

Car Starter.

No. 90,216.

Patented May 18, 1869.



WITNESSES

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INVENTOR

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W. P. ANDERSON, OF NEW YORK, N. Y.

Letters Patent No. 90,216, dated May 18, 1869.

IMPROVEMENT IN RAILWAY-CAR CONNECTIONS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, W. P. ANDERSON, of New York, in the county and State of New York, have invented a new and useful Improvement in Cars for Railroads; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan view of my improved device, as attached to a street-car.

Figure 2 is a transverse vertical section, on line *xx* of fig. 1.

Corresponding letters, in both figures, refer to corresponding parts.

This invention has reference to a device to be used upon street-cars, for the purpose of relieving the shock usually felt in starting such cars; and

It consists in a device to be attached to such cars, for that purpose, the nature and construction of which will be fully explained hereinafter.

A, in the drawings, represents the frame-work of the car, or it may be a frame attached thereto, of any suitable construction, and so arranged as to receive and hold in position the drums or casings B B', which represent receptacles for springs.

These casings are to be made of metal, with one of their heads removable, so as to permit the insertion of the springs, they being secured to the body of the case, by the screws *c c*, as shown in fig. 1.

These cases or drums are to be bolted to the frame-work, by the bolts *b b*, or secured in position by any other suitable means. They are to have an aperture through their centres, and a projecting hub upon their outer surfaces, for the passage of the shaft C, which passes entirely through both, and has upon its central portion a drum or pulley, for the reception of the chain or rope F.

The cavity within these cases is to be of such dimensions as to receive the coiled spring E, one end of which is to be secured to the case, as shown at *a*, fig. 2, while the other end is to be secured to the shaft C, shown in the same figure.

This device having been constructed and arranged, as shown and described, its operation will be as follows:

The rope or chain F, being the medium through

which the power is applied to move the car, may be attached to another belt, rope, or chain, in cases where such devices are employed to move the car, as is the case when such cars are propelled by stationary power, or the whiffle-tree may be attached to the rope or chain F, when animal-power is used. In either case, it will be seen, that as the force is applied to a car, when in a state of rest, it will be put in motion without receiving any sudden shock, because of the fact, that the force is applied through the rope or chain F, the pulley or drum D, shaft C, and springs E, the springs yielding to such force, and permitting the other parts to rotate sufficiently to prevent any injurious shock; or, in other words, the first impulse given to the car will be received upon the springs, and through them be transmitted to the car, which will gradually commence moving, and thus the starting will be effected without the shock usual in such cases.

I have spoken of my device as applicable to street-cars only, but it is apparent that it may be applied, with equal advantage, to cars upon roads where locomotive power is used, and where the shock in starting is even greater than in street-cars.

The advantages of my improvement have been partially stated, as preventing the shock of starting the cars, but they extend to the moving of the same through all their variations of speed, giving to the same an even movement; and preventing those sudden jerks so often felt by persons while riding in all kinds of railway-cars.

Having thus described my invention,

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

Combining with a car, for use upon railways, a device, consisting of cases B B', for containing springs, springs for receiving the shock in starting the car, a rope or chain, F, a drum or pulley, D, and a shaft, C, for communicating the propelling-power to the springs, substantially as and for the purpose specified.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

W. P. ANDERSON.

Witnesses:

CHARLES K. GRAHAM,
FELIX VEIT.