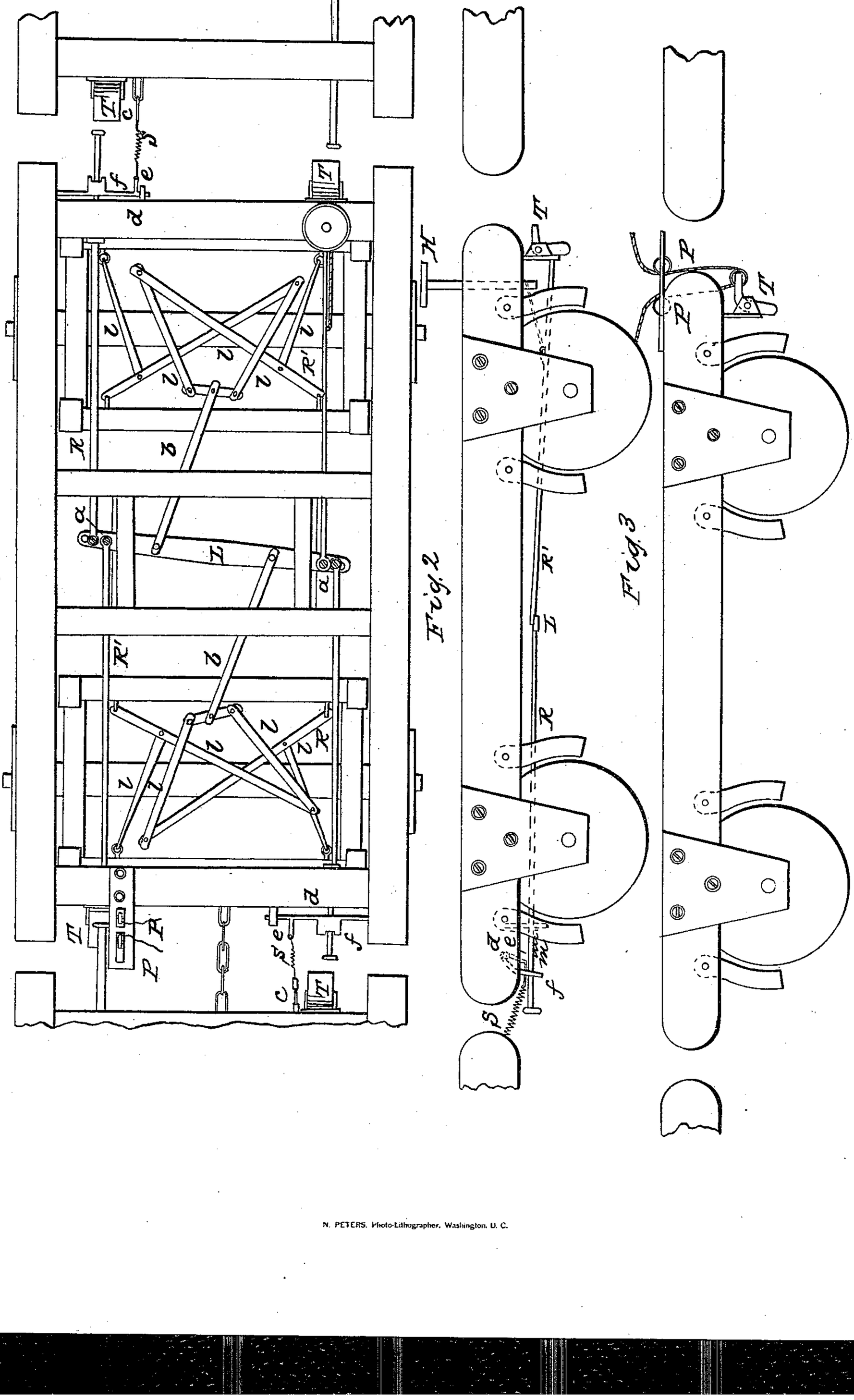
B. T. TRIMMER.

Car Brake.

No. 14,681. Patented April 15, 1856.



N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

BENJ. T. TRIMMER, OF PARMA, NEW YORK.

RAILROAD-BRAKE.

Specification of Letters Patent No. 14,681, dated April 15, 1856.

To all whom it may concern:

Be it known that I, BENJAMIN T. TRIMMER, of Parma, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Railroad-Car Brakes, of which the following is a full and accurate description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan. Figs. 2 and 3 are side elevations.

The nature of this invention consists, first, in a certain arrangement whereby each car acts to brake the one next to it, without the necessity of the cars approaching any nearer to each other, or moving through a greater space than is absolutely necessary to operate a single set of brakes. Secondly, in a mode of throwing the brake rods into and out of gear, whereby they will either operate the brakes, or allow of backing, as may be necessary. Thirdly, in an arrangement of levers whereby an efficient tension is exerted upon the brakes, through the influence of the side brake rods. Fourthly, in an arrangement whereby the forward motion of the engine serves to relax the brakes; and fifthly, in a means whereby the conductor or engineer can operate the brakes of one car, or any number less than the whole as well as the entire train, which feature is often necessary—as for example when a detached series of cars are descending an inclined plane.

I will now with the aid of the drawings, explain *seriatim*, my method of obtaining these results.

R R are the brake-rods, which operate through the intervention of the levers and brakes, to brake the wheels. As a continuation of these brake-rods (being jointed to the same levers at *a*, *a*,) are the rods R′ R′, which of course partake of the movement of the brake-rods. Hence any pressure on the brake-rods R R will communicate to the secondary rods R′ R′ and elevate the tumblers T T, which will now afford an abutment for the brake-rod of the next car, which will of course act in turn in a similar manner on the next in series.

If it be desired to back without braking, the engineer of course leaves the tumblers on the tender down, which will leave all the brade-rods free, and no action will be effected on the brakes. The brake-rods act on the brakes, through the intervention of the main lever L acting on the combination of levers L L L. The action of these levers will be understood much more easily and clearly from the drawings, than from any description. It will therefore be sufficient to state that any pressure on the end of the brake-rods will cause the levers L to move around its center, when each end will draw after it, the tension bar (*b*) in connection therewith, and through the levers L L L will press the brakes against the wheel.

The brake-rods and levers are kept in a tense state by the action of the racks (*m*,) as will be readily seen on inspecting the drawings. On the forward motion of the engine however, the chain C being extended will act on the lever *e*, rock shaft *d*, and raise the rack out of gear by the lifter *f*. The springs S will then operate to relax the brakes.

If the engineer or conductor should desire to brake one or more cars in the rear, by operating on the tumbler of the desired car through the intervention of the pulleys P P and cord, and at the same time operate the hand-wheel H so as to brake one car, all the succeeding cars will be braked with a force equal to that acting on the first car—which force will of course be multiplied just so many times as there are cars.

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

1. The combination of the secondary brakerods R′, R′, with the tumblers T, T, said tumblers being firmly attached to the truck and supported by it.

2. The combination of the handwheel and secondary brakerods said combination performing the double function of braking the wheels of the car to which it is attached and raising the tumblers to operate the other brakes.

3. The combination of the rock-shaft with the extensible and elastic chain whereby the forward motion of the engine relaxes the brakes, without danger of breaking said chain.

B. T. TRIMMER. [L. S.]

Witnesses:

JOHN PHIN,
A. K. AMIDEN,
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ALBERT M. SMITH.