

S. E. HARRISON.

Improvement in Car-Brakes.

No. 127,233.

Patented May 28, 1872.

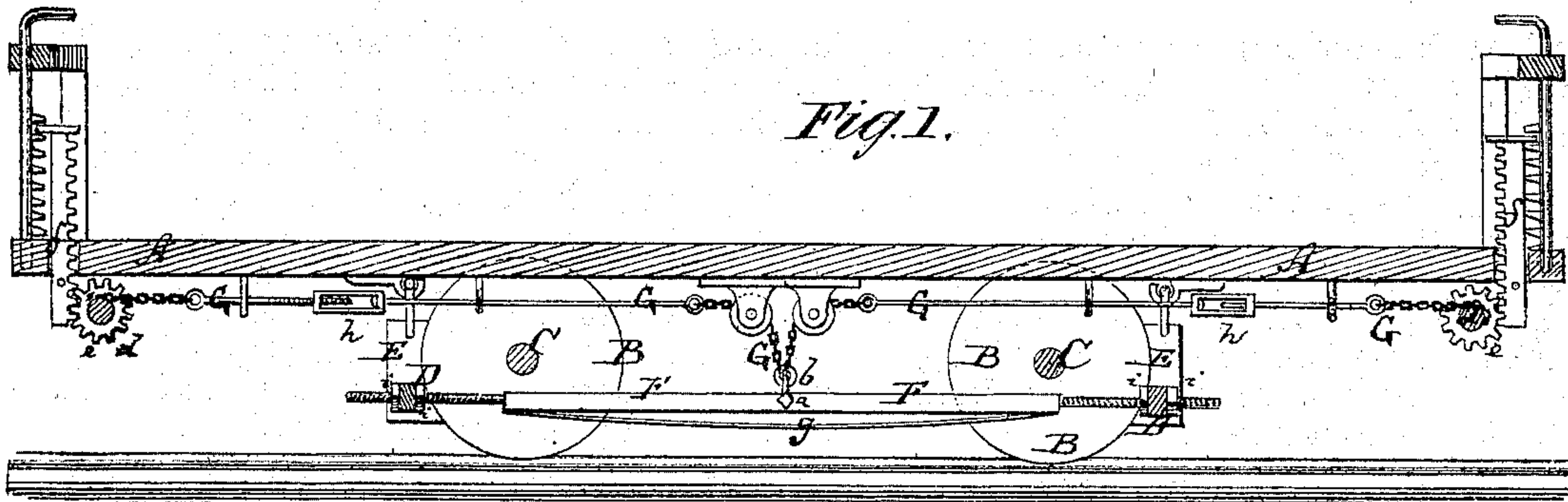


Fig. 1.

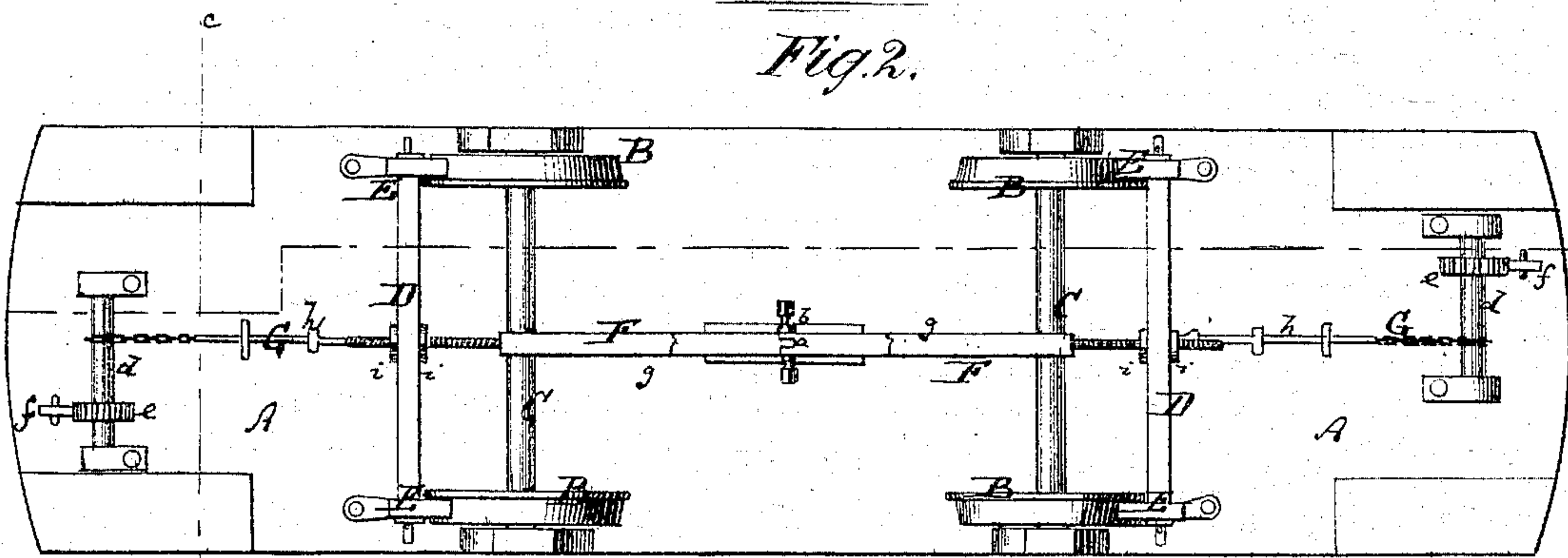


Fig. 2.

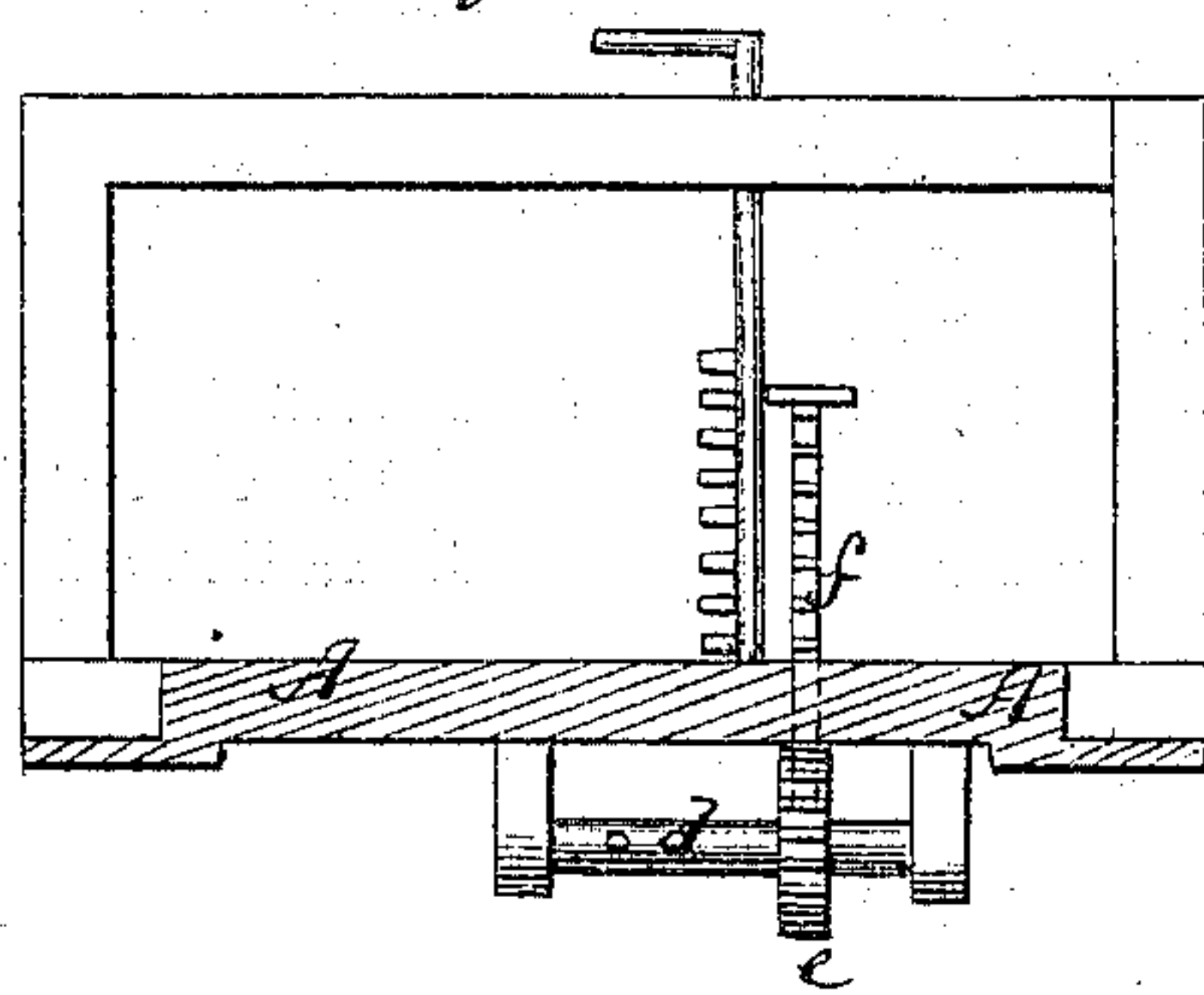


Fig. 3.

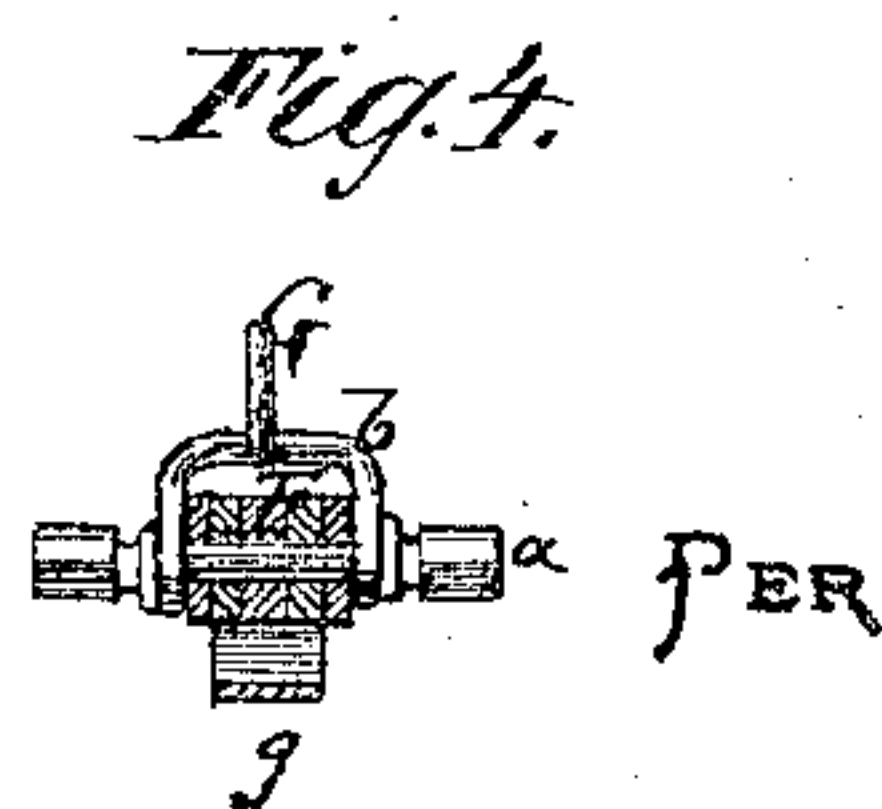


Fig. 4.

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UNITED STATES PATENT OFFICE.

STEPHEN E. HARRISON, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 127,233, dated May 28, 1872.

Specification describing a new and Improved Car-Brake, invented by STEPHEN E. HARRISON, of New Haven, in the county of New Haven and State of Connecticut.

Figure 1 represents a vertical longitudinal section of a railroad car provided with my improved brake. Fig. 2 is a bottom view of the same. Fig. 3 is a vertical transverse section of the same on the line *c c*, Fig. 2; and Fig. 4 is a detail transverse section of the clevis attachment to the toggle-lever.

Similar letters of reference indicate corresponding parts.

This invention relates to a new mechanism for applying the brakes to the wheels of steam or horse cars; and consists principally in connecting the brake-beams by toggle-levers, and in applying springs to said levers for holding them expanded, all as hereinafter more fully described.

A in the drawing represents the car-body. B are the wheels, mounted on axles C C in the ordinary manner. D D are the brake-beams, carrying at their ends the brake-shoes E E. F is a toggle-lever, which, at its ends, is connected with the brake-beams D D, its joint *a* in the middle having a clevis, *b*, to which the ends of chains G G are secured. These chains extend to the ends of the car, respectively, where they are fastened to shafts *d d*, as shown. Pinions *e e* on the shafts *d* mesh into sliding racks *f* that can be forced down by the driver or attendant to so turn the shafts as to wind the chains upon them. A spring, *g*, serves to keep the toggle-levers distended, and thereby to hold the brake-shoes away from the wheels.

Whenever one of the chains is wound around

its shaft *d*, by the depression of one of the racks *f* the toggle-joint will be raised and the toggle-levers somewhat contracted, so as to draw the brake-beams toward each other and thereby apply the brakes to the wheels. By this arrangement a very slight motion of the rack will suffice to apply the brakes with great power. Immediately on the rack being released, the spring will again distend the toggle-levers, carry the brakes off the wheels, and unwind the chain from the shaft *d*.

The chains G can be made extensible or contractible by right-and-left nuts *h* applied within them to jointed rods.

The ends of the toggle-levers, where they pass through the beams D, are provided with screw-threads and held by nuts *i i*, so that by shifting said nuts the distance between the brake-beams can be more or less varied, as may be found necessary.

Suitable catches for holding the racks *f* down and the brakes applied may be provided.

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

The toggle-lever F, held in line by a straight spring, *g*, connected at each end to reversely-acting brake-beams D D, and attached at the middle to chains G G, which, respectively, extend to each end of car, as and for the purpose set forth.

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