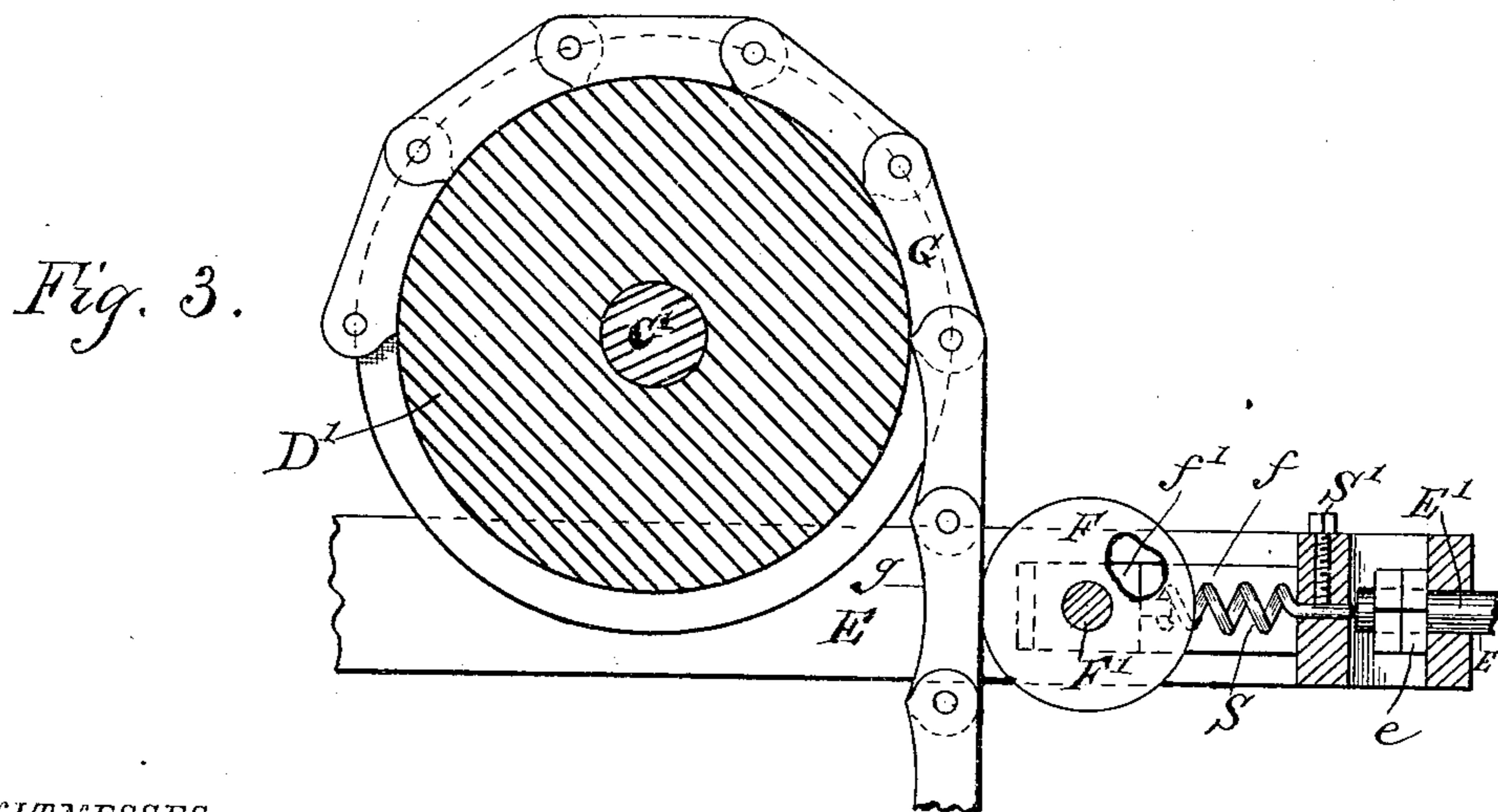
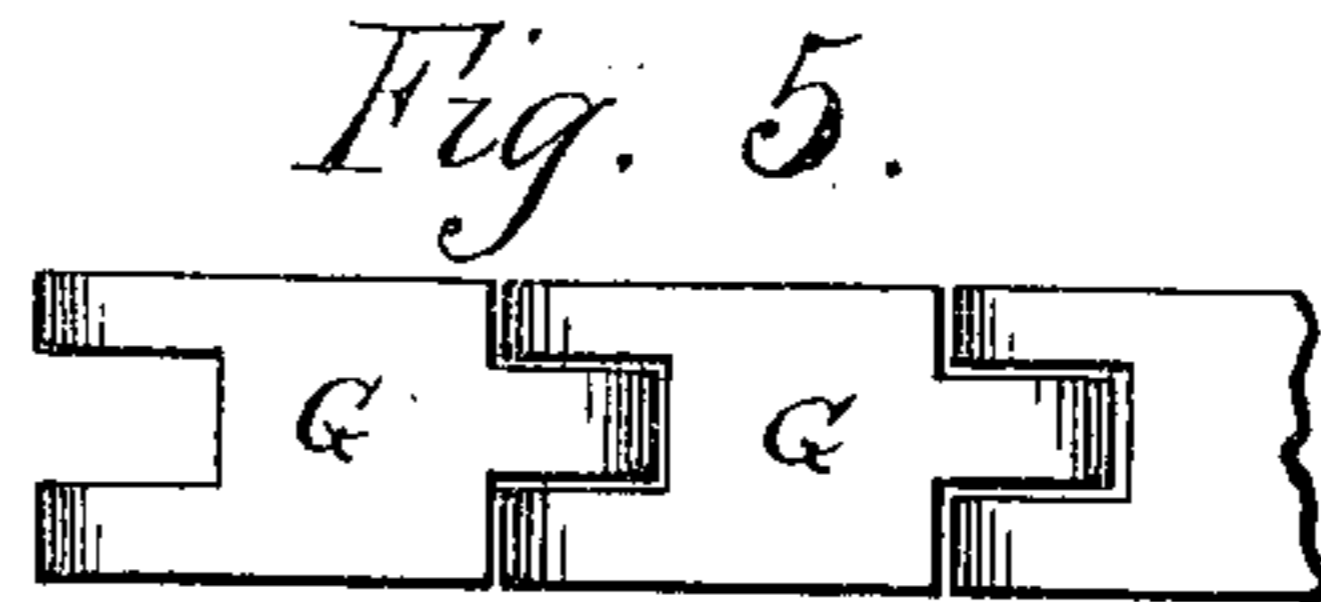
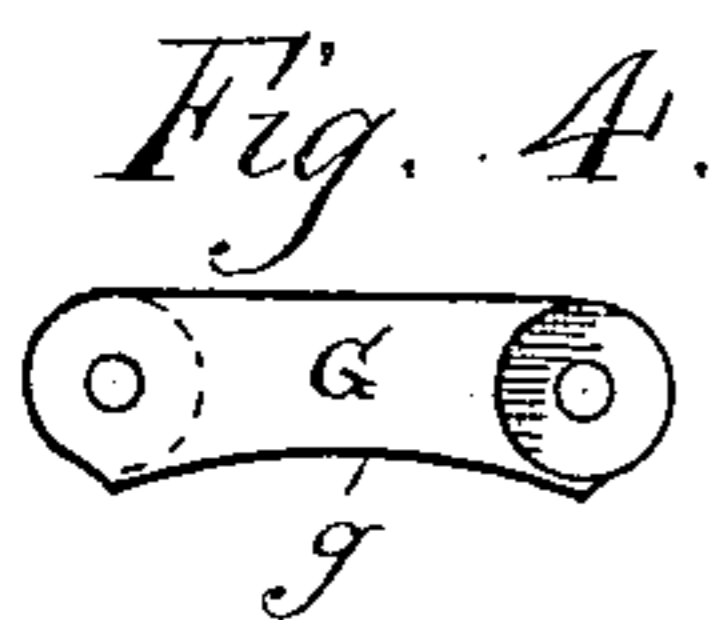
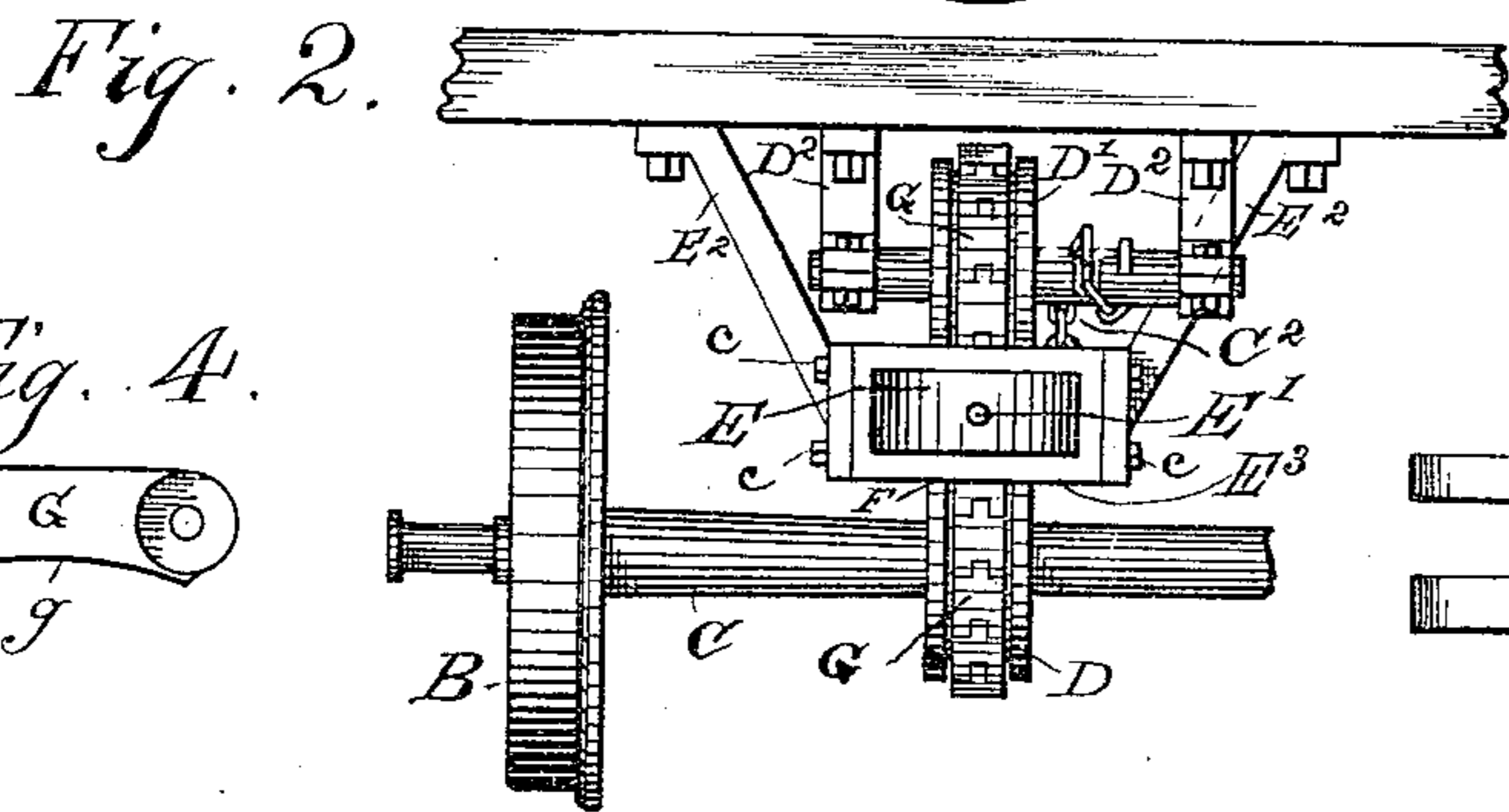
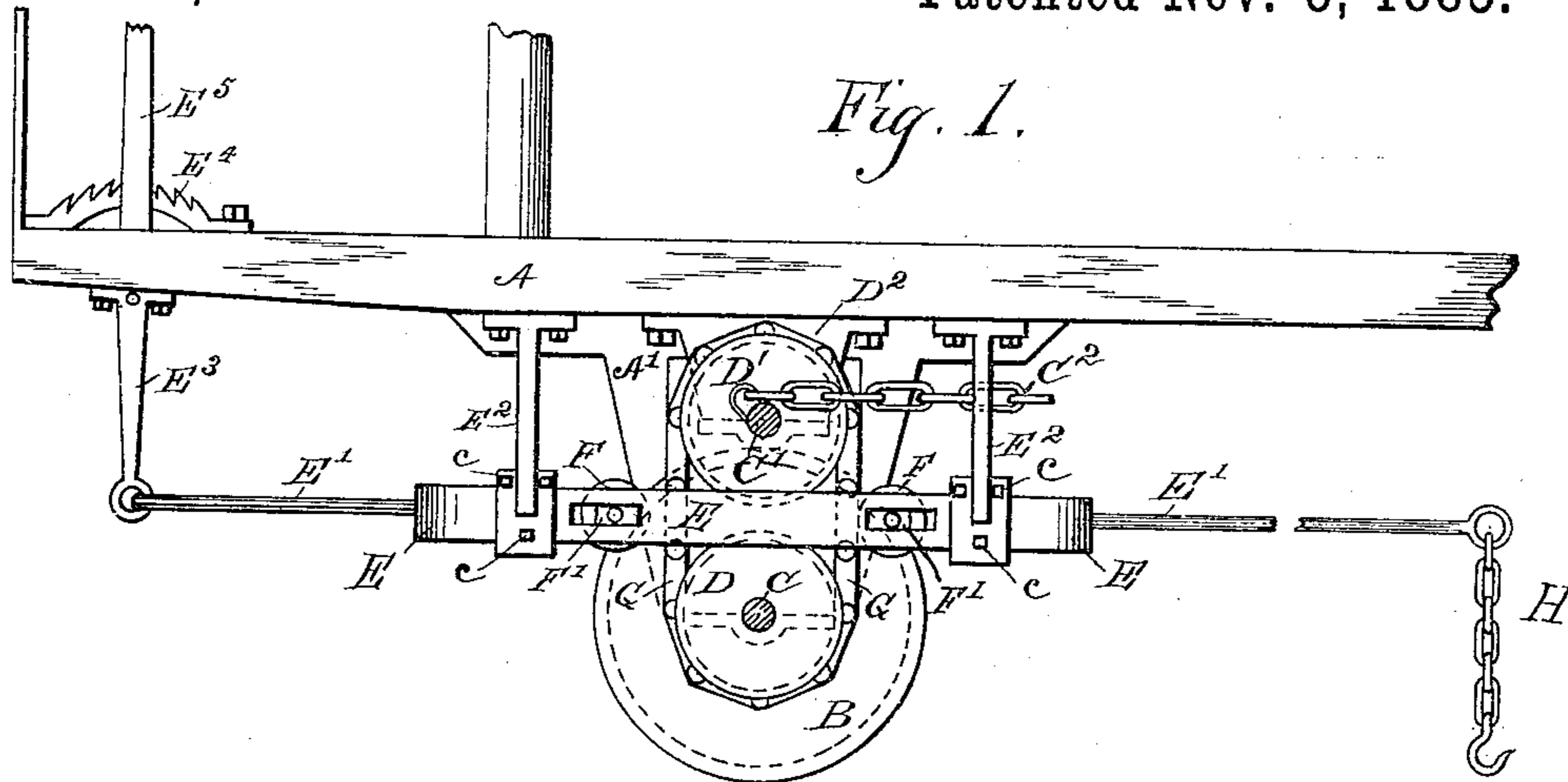


(No Model.)

A. L. KIRKLAND.
CAR BRAKE.

No. 329,840.

Patented Nov. 3, 1885.



WITNESSES

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AUSTIN L. KIRKLAND, OF PITTSBURG, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 329,840, dated November 3, 1885.

Application filed August 28, 1885. Serial No. 175,568. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN L. KIRKLAND, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The object of this improvement is a mechanism for operating the brakes of railroad-cars in a rapid and positive manner. These results are attained by the means illustrated in the drawings herewith filed as part hereof, in which the same letters of reference denote the same parts in the different views.

15 Figure 1 is a longitudinal vertical section of a car provided with a brake-operating mechanism embodying the features of my improvement. Fig. 2 is an end view of my device, showing the same attached to a section of the car and axle of the truck-wheels. Fig. 3 is a longitudinal vertical sectional view representing details on an enlarged scale, and more fully illustrating the construction and operation of the parts. Fig. 4 is a sectional detail view, and Fig. 5 is a representation of one of the chain-links detached.

A is the car-frame.

30 A' is the truck-frame.

B is the truck-wheel.

D is a sheave or grooved pulley centrally secured to the truck-wheel axle C.

35 D' is a sheave or grooved pulley supported in line with the sheave D by shaft C', having bearings in hangers D², suitably secured to the car-frame A.

40 E is a cast-metal frame, suspended in the position shown by hangers composed of inclined arms E², secured to the car-frame and made integral with or bolted, as shown at *e*, to oblong square frames E³, in which the frame E is arranged to slide, as hereinafter set forth.

45 F F are rollers supported by bolts F', having bearings in blocks *f'*, as shown in Fig. 3, which slide in slots *f* of the frame E when the latter is adjusted, for a purpose to be presently explained.

50 G is an endless chain suspended loosely around the pulley D from the pulley D'. The inner or bearing surface of the links of the

chain G are curved, as shown at *g*, Figs. 3 and 4, to correspond exactly with their bearings in the pulleys D D'.

C² is a chain to be connected from the shaft 55 of the pulley D', with the ordinary brake mechanism, by means of which the brake-shoes are set against the car-wheels.

E' E' are rods connected with the slide-frame E, substantially in the manner shown at *e*, 60 Fig. 3, and thence with a lever, E⁵, at the end of the car.

E⁴ is a ratchet-plate secured to the platform of the car adjacent to the lever E⁵, which is to be provided with a pawl for engaging with 65 the detents of the ratchet-plate as occasion may require.

S represents spiral springs firmly secured to the frame E by set-screws S', and suitably connected thence with the sliding bearings *f'* 70 of the rollers F. When the lever E⁵ is moved in one direction or the other, the slide-frame E will be correspondingly adjusted, and one or the other of the rollers F F will engage with and tighten the chain G, which will cause the 75 pulley D' to turn, and by winding the chain C² around its shaft C' thus make the force involved in the motion of the car or train apply the brake-shoes to the car-wheels in a rapid and positive manner and with much greater 80 effect than is possible with the ordinary hand-operated brakes.

By means of the chain H on the rod E' the mechanism may be connected with and made to operate the brakes on the adjoining car, 85 and then the brakes on more than one car can be operated by the lever E⁵.

Having explained the construction and operation of my improvement, what I claim as new, and desire to secure by Letters Patent, 90 is—

The frame E, provided with rollers F F, the pulleys D D', chain G, and chain C², arranged to operate the car-brakes, substantially as specified, for the purpose set forth. 95

In testimony whereof I affix my signature in presence of two witnesses.

AUSTIN L. KIRKLAND.

Witnesses:

GEORGE MARS,
R. C. RANKIN.