(No Model.)

R. R. MARSH.

CAR BRAKE.

No. 324,714. Patented Aug. 18, 1885.

Fig. 1.

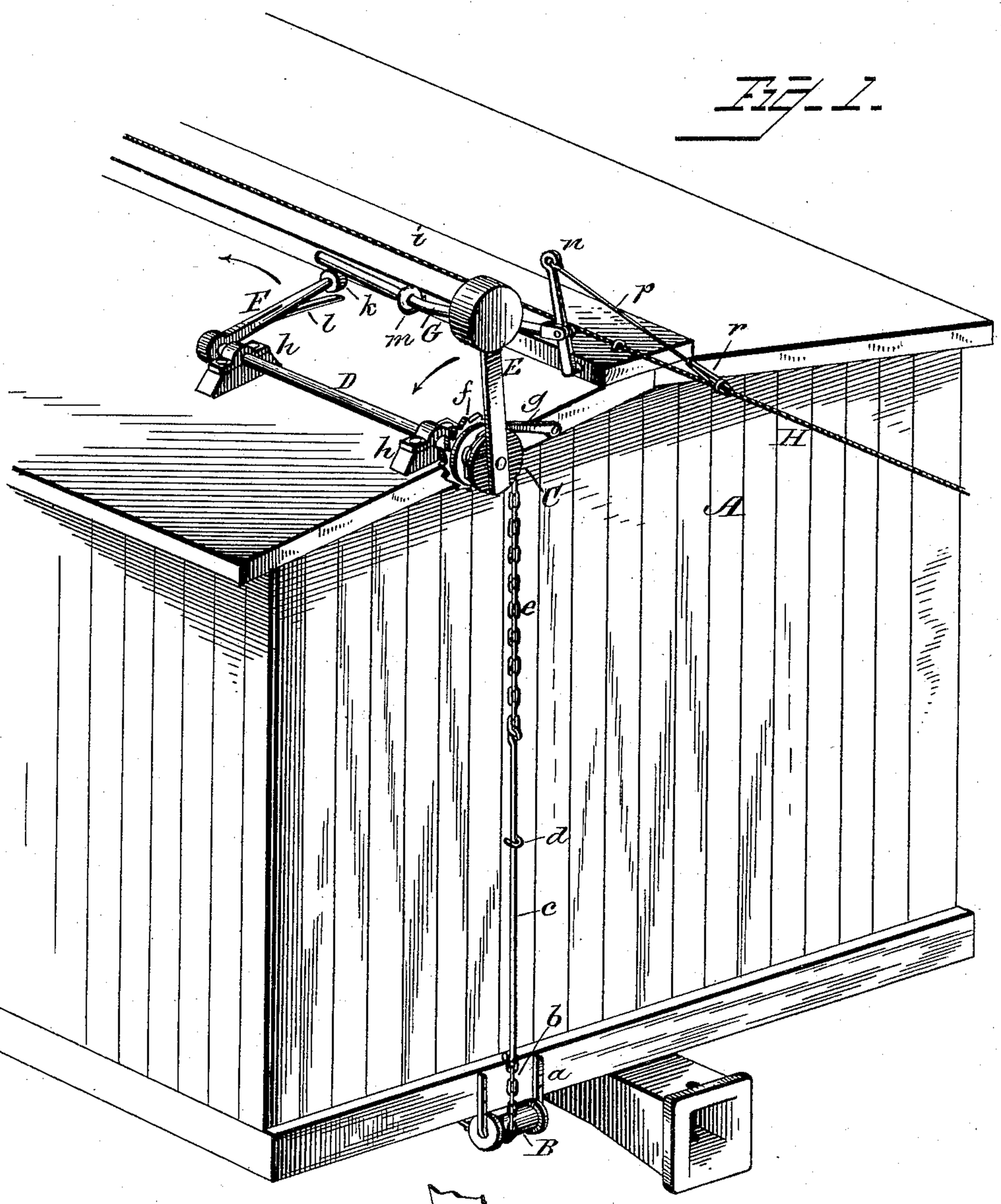
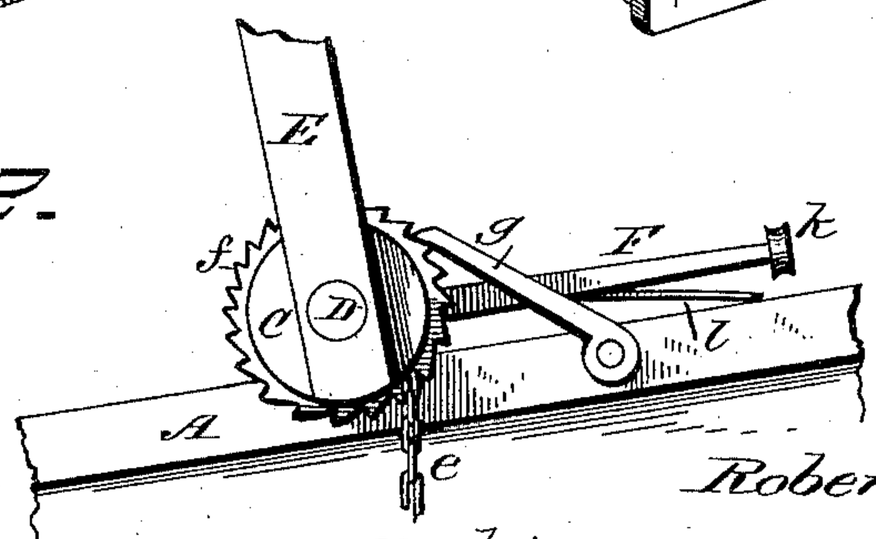


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 324,714, dated August 18, 1885.

Application filed April 28, 1885. (No model.)

To all whom it may concern:

Be it known that I, ROBERT R. MARSH, a citizen of the United States, residing at Owosso, in the county of Shiawassee and State of Michigan, have invented certain new and useful Improvements in Car-Brakes; 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 a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings represents a portion of a freight car with my improved brake mechanism connected thereto, and Fig. 2 a detail view of a portion of the brake mechanism.

The present invention has relation to certain new and useful improvements in means for automatically operating the brakes of freight-cars, and the object thereof is to improve and simplify the mechanism, whereby a train of freight-cars can be as easily controlled as the passenger-trains can with their steam or air brakes; and the invention consists in the details of construction, substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents the end of a freight-car, provided at its bottom with a flanged friction-pulley, B, supported in a suitable hanger, *a*. Around the under side of the pulley B passes a chain, *b*, connected at one end with the usual car-brake, and at the opposite end with a short rod, *c*, which passes up through a guide-staple, *d*. To the upper end of the rod *c* is attached one end of a chain, *e*, said chain extending up and around a windlass, C, provided with a ratchet, *f*, with which engages a pivoted pawl, *g*. The windlass C is keyed or otherwise similarly connected to the outer end of a longitudinal rod, D, having its bearings in suitable boxes, *h*, upon the roof of the car.

To the extreme end of the rod D, upon the outside of the windlass C, is rigidly secured a weighted lever, E, and to the opposite or inner end of the rod, and at right angles thereto, is attached an arm, F. This arm is of sufficient length to extend to the side of the running-board *i* of the car, and is provided at its free end with a button, *k*, and upon its under side is provided with a spring, *l*.

A trip-lever, G, which retains the arm F in a set position, passes through a guide, *m*, secured to the edge of the running-board *i*, and is operated by an arm, *n*, to which the end of the trip-lever is pivoted, said arm *n* being in turn pivoted to the running-board or other convenient part of the car top or roof. To the free or upper end of the arm *n* is attached a cord or rod, *p*, provided with a snap, *r*, or other similar device, for connecting it with the bell-rope H of the train of cars.

In setting the brake mechanism the arm F is brought down to the position shown in Fig. 1 and the trip-lever G forced back so that the end thereof will be directly over the button *k*.

When it is desired to put on brakes, by pulling on the bell cord or rope H, the trip-lever G is drawn back from contact with the button *k*, and the weighted lever E, by its gravity, will descend and turn the windlass C, winding thereon the chain *e*, and bringing the brake-shoes into action.

The spring *l* assists in throwing up the arm F when released by the trip-lever G, and the button *k* on said arm renders it more easily operated.

Should it not be desirable to use a bell-rope, the mechanism can be operated by hand, and the brake-operating mechanism can be connected to each end of the car.

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

1. A brake mechanism consisting of a windlass, ratchet and pawl connecting with the brakes, a weighted lever for operating the windlass, and a tripping device for setting and tripping the mechanism, substantially as and for the purpose set forth.

2. In a mechanism for operating the brakes of cars, consisting of a weighted lever, a windlass, ratchet and pawl attached to the brakes by suitable chains, a rod to which the windlass

is secured, provided with an arm, in combination with a sliding trip-lever, substantially as and for the purpose specified.

3. In a brake mechanism, a rod provided at one end with a windlass and weighted lever, and at the opposite end with an arm having a button and spring, in combination with a trip-lever, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ROBERT R. MARSH.

Witnesses:
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