(No Model.)

O. WETMORE.

LOCOMOTIVE ATTACHMENT.

No. 284,520. Patented Sept. 4, 1883.

Fig. 1.

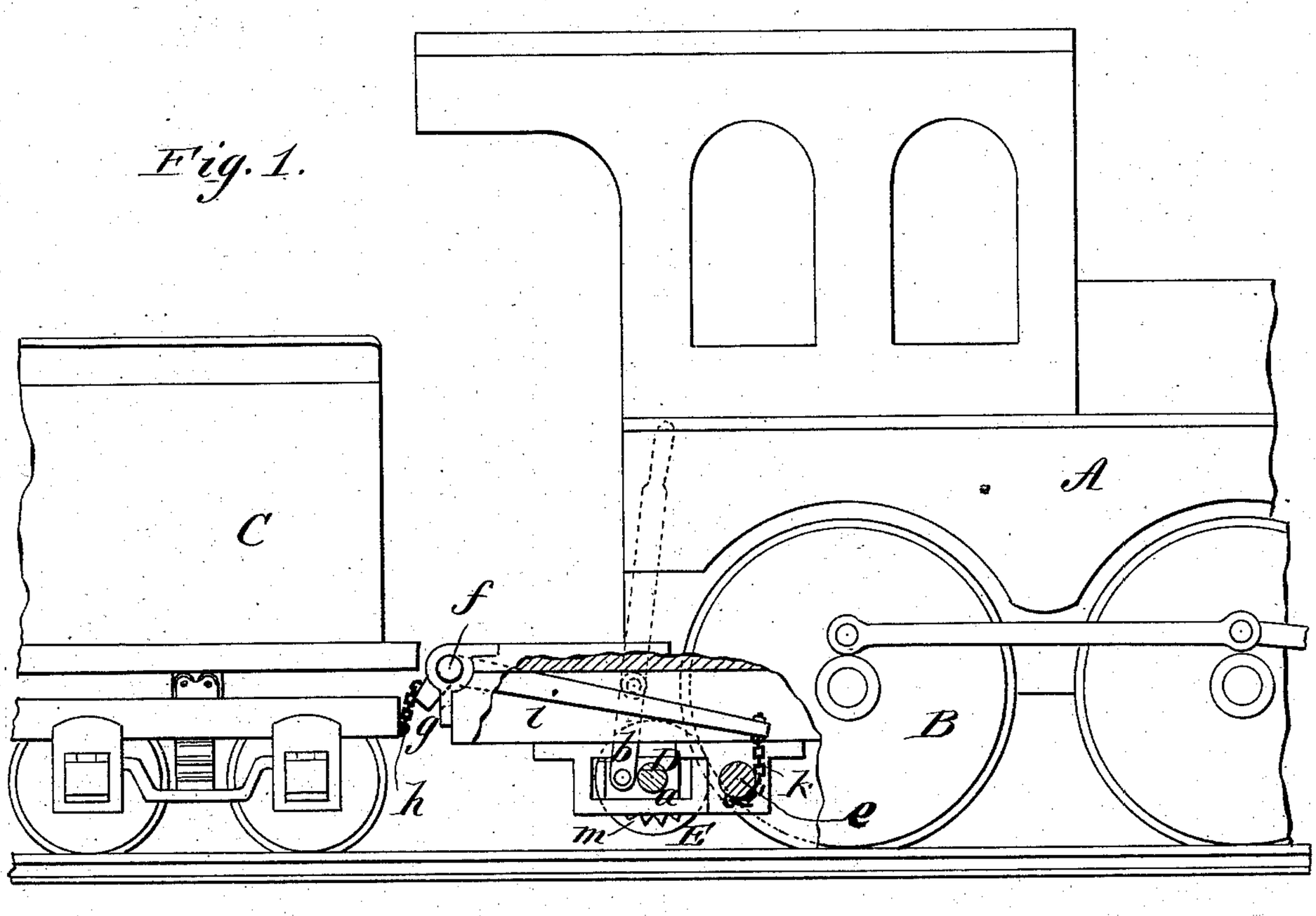
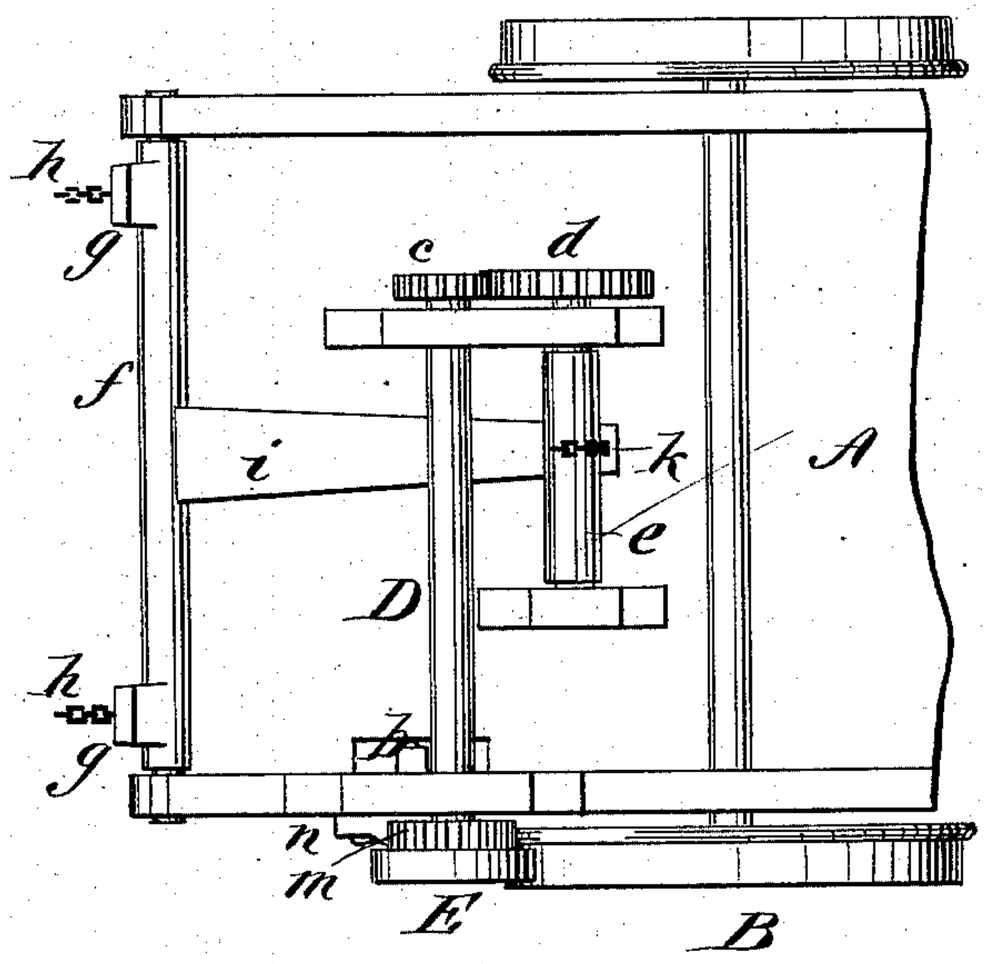


Fig. 2.



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LOCOMOTIVE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 284,520, dated September 4, 1883.

Application filed January 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO WETMORE, of Nevada, in the county of Vernon and State of Missouri, have invented a new and Improved Locomotive Attachment, of which the following is a full, clear, and exact description.

The object of my invention is to utilize a portion of the weight of locomotive-tenders for increasing the tractive power of the driving-wheels of the locomotive; and it consists in an attachment to the locomotive by which the weight of the forward portion of the tender can be brought to bear upon the driving-wheels at the will of the engineer, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a partly sectional side view, and Fig. 2 is an inverted plan view, of a locomotive with my attachment applied.

A is a locomotive, having driving-wheels B, and C is the tender, all as usual.

D is a secondary shaft or axle fitted at the rear part of the locomotive, transversely thereof, and provided at one end with a friction-wheel, E. The end of this shaft D, carrying the wheel E, is fitted in a sliding box, *a*, to which is connected a lever, *b*, extending up into the cab of the engine, so that by the movement of the said lever the friction-wheel E may be brought into contact with the driving-wheels. The shaft D also carries a pinion, *c*, engaging a pinion, *d*, that is attached on a shaft or drum, *e*. At the rear end of the locomotive is a rock-shaft, *f*, fitted in suitable bearings, and formed with lugs *g g*, from which chains *h* pass to and are connected with the lower part or under side of the tender. The rock-shaft *f* is also fitted with an arm or lever, *i*, which extends above the shaft or drum *e*, to which it is connected by the chain *k*. When it is desired to bring a portion of the weight of the tender upon the driving-wheels, the lever is moved to bring the friction-wheel E in contact with the driving-wheel, and the friction-wheel being thereby rotated, the drum is turned, the chain *k* wound thereon, and the lever *i* drawn down with the effect to give a partial turn to the rock-shaft *f*, and thereby slightly raise the tender. In this position of the tender the draft is transferred from the platform of the engine to the lower part of the tender, so that the stronger the pull of the locomotive the greater will be the effect upon the driving-wheels. In order to retain the tender in this position, I provide the ratchet-wheel *m* upon the shaft D, and the pawl-lever *n*. When the lever *n* is engaged with the ratchet-wheel, the friction-wheel may be released from the driving-wheels, and the pawl will prevent the backward movement of the shaft.

It will be seen that a portion of the weight of the tender can be readily brought to bear upon the driving-wheels at the will of the engineer, and the tractive force thereby increased whenever required.

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

1. The combination, with a locomotive and its tender, of a rock-shaft bearing in the locomotive-frame and connected by suitable means to the tender, said rock-shaft having a lever-arm connected at one end to a shaft having a pinion gearing with a pinion on a second shaft having a friction-roll adapted to bear against one of the driving-wheels, substantially as and for the purpose set forth.

2. The combination, with a locomotive and its tender, of a rock-shaft bearing in the locomotive-frame and connected by suitable means to the tender, said rock-shaft having a lever-arm connected at one end to a shaft having a pinion, a second shaft having a pinion and a friction roll or wheel, and the hand-lever connected to a slide supporting the friction-wheel end of the latter shaft, substantially as and for the purpose specified.

3. The combination of the shaft *f*, provided with the arm *i*, the shaft D, the friction-wheel E, the drum *e*, and the lever *b*, substantially as shown and described, with a locomotive for utilizing a portion of the weight of the tender, as specified.

ORLANDO WETMORE.

Witnesses:

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