

(No Model.)

R. L. STEVENS.  
LOCOMOTIVE ATTACHMENT.

No. 422,653.

Patented Mar. 4, 1890.

Fig. 1

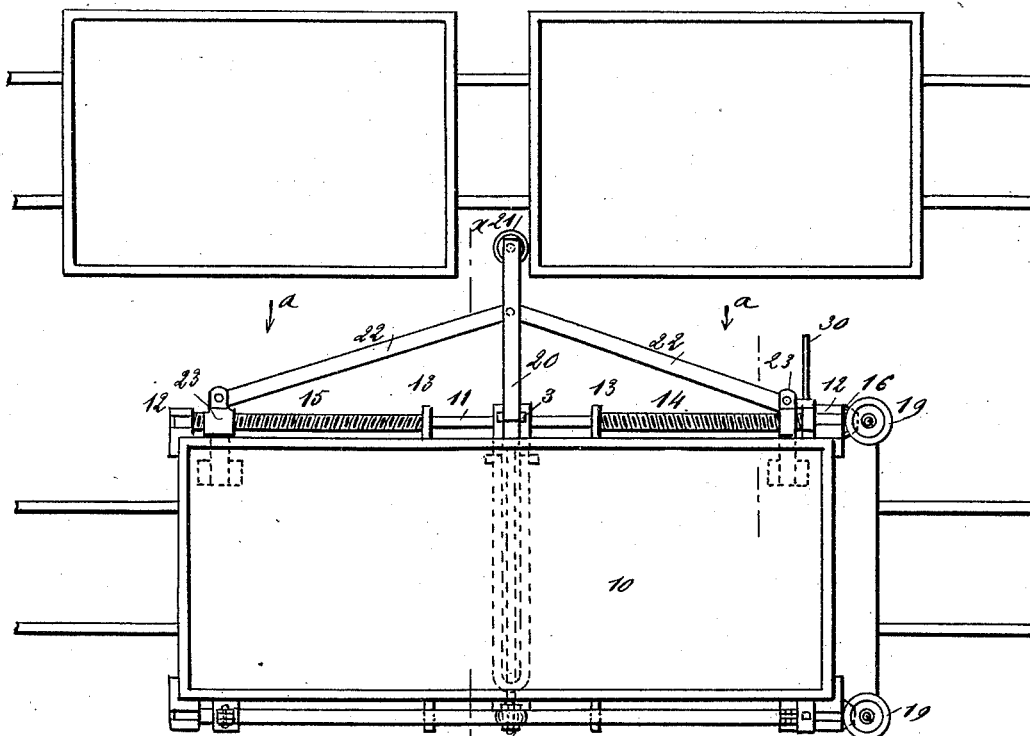


Fig. 2

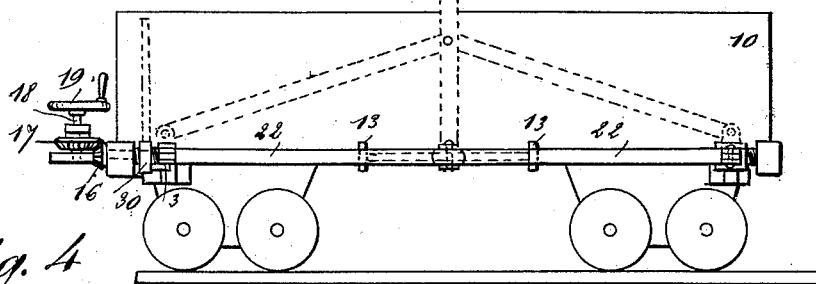


Fig. 4

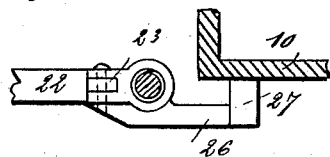


Fig. 5

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## LOCOMOTIVE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 422,653, dated March 4, 1890.

Application filed September 2, 1887. Serial No. 248,589. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT L. STEVENS, of Columbus, in the county of Platte and State of Nebraska, have invented a new and Improved Locomotive Attachment, of which the following is a full, clear, and exact description.

This invention relates to a novel attachment for locomotives, the object of the invention being to provide for the moving of cars that are upon tracks adjacent to the one upon which the engine is running; and to this end the invention consists of an extensible folding arm that is preferably connected to the locomotive-tender.

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

Figure 1 is a plan view of a locomotive-tender, representing the same as it appears when provided with my improved attachment, the parts being represented as they appear when in position to operate upon two flat or coal cars. Fig. 2 is a side view of the tender, the view being taken in the direction of the arrows *a a* in Fig. 1. Fig. 3 is a cross-sectional view taken on line *x x* of Fig. 1, and Fig. 4 is a detail view illustrating the construction of the counterbalancing-arms.

In the drawings, 10 represents a locomotive-tender, to each side of which there is secured a shaft 11, said shaft being supported by end journals 12 and by central journals 13. This shaft 11 is threaded at 14 and 15, the threads of the two sections running in inverse directions, and upon the end of the shaft there is secured a bevel-gear 16, engaged by a corresponding gear 17, that is carried by a short vertical shaft 18, that is mounted at one end of the tender within reach of the fireman or engineer, said shaft 18 being provided with a hand-wheel 19, preferably of the construction commonly employed in connection with the brake-shafts.

About the center of the shaft 11 there is pivotally mounted an arm 20, in the end of which there is journaled an anti-friction wheel 21, and to this arm 20 there are pivotally connected braces 22, which braces in turn are pivotally connected to nuts 23, that are mounted upon the threaded sections 14 and 15 of the shaft 11.

The inner end of the arm 20 carries a cross-piece 3, which fits within the slide 24, which is longitudinally slotted, as shown at 2, to provide for the passage of the shaft 11, the slide serving to steady the arm 20 when such arm is extended.

When the parts are in either of the positions in which they are shown in the drawings, the cross-piece 3 abuts against the shaft 11; but if the shaft be turned so that the nuts will travel toward the center the arm 20 will be extended and the slide 24 drawn out.

The nuts 23 are each provided with inwardly-extending arms 26, which carry weights 27, said arms and their weights tending to counterbalance the weight of the braces 22 and of the arm 20. When the arm 20 is in the position in which it is shown in Fig. 1, the weights will abut against the under side of the tender-body, acting as stops to hold the arm 20 in a horizontal position.

Attachments such as the one above described are secured to each side of the tender, and when it is desired to move cars that are upon a side track the proper arm 20 is lowered to the position in which it is shown in Fig. 1, after which, if the arm is not long enough to reach the cars it is desired to move, the shaft 18 is turned through the medium of its hand-wheel until the extending end of the arm 20 will enter the space between two of the cars that it is proposed to move. Then if the engine be started in the required direction the cars will be advanced, and sufficient headway having been imparted to the cars, the arm 20 may be withdrawn by turning the shaft 18 in an opposite direction, and then the arm 20 may be moved to the position in which it is shown in dotted lines in Figs. 2 and 3, this movement being brought about by means of a lever 30, that is loosely mounted upon the shaft 11, said lever being provided with an inwardly-extending lug 3, which, when the adjacent nut 23 is moved to a position such as that represented in Fig. 1, will bear against the under side of the extending section of said nut.

From the construction above described it will be seen that an engine equipped with my improved attachment will be able to move the cars that are upon tracks located at either the right or left of the engine, thus avoid-

ing the necessity of backing onto a siding when it is necessary to move such cars.

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

1. The combination, with a threaded shaft and a means for turning the same, of nuts mounted on the shaft, braces connected to the nuts, an arm to which the braces are connected, and a means for guiding the arm, as  
10 and for the purpose stated.

2. The combination, with a threaded shaft and a means for turning the same, of nuts mounted on the shaft, braces pivotally connected to the nuts, an arm to which the braces  
15 are connected, and a slide to which the inner end of the arm is connected, substantially as described.

3. The combination, with a threaded shaft

and a means for turning the same, of nuts 20 mounted on the shaft, braces pivotally connected to the nuts, an arm to which the braces are pivotally connected, an anti-friction wheel carried by the arm, and a slide to which the inner end of the arm is connected, substan- 25 tially as described.

4. The combination, with a threaded shaft and a means for turning the same, of nuts mounted on the shaft, braces pivotally connected to the nuts, an arm to which the braces 30 are connected, a slide to which the inner end of the arm is connected, and a lever adapted to engage one of the nuts, substantially as described.

ROBERT L. STEVENS.

Witnesses:

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