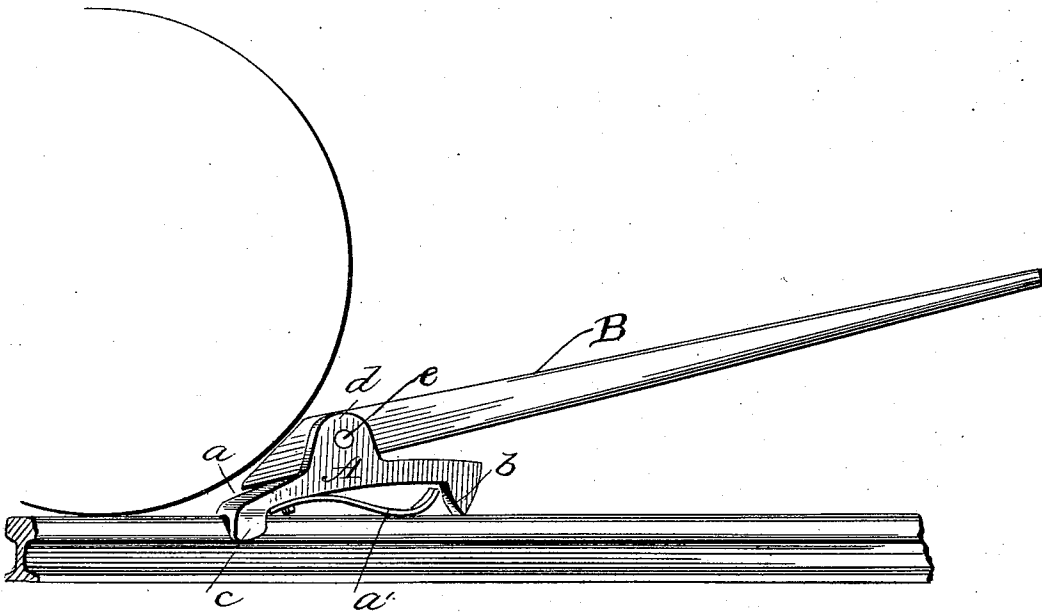


(No Model.)

E. A. MUNSON.  
CAR MOVER.

No. 464,379.

Patented Dec. 1, 1891.



Attest  
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Att'y.

# UNITED STATES PATENT OFFICE.

EDWARD A. MUNSON, OF GRAND RAPIDS, MICHIGAN.

## CAR-MOVER.

SPECIFICATION forming part of Letters Patent No. 464,379, dated December 1, 1891.

Application filed March 7, 1891. Serial No. 384,094. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. MUNSON, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Car-Movers, of which the following is a specification.

My invention relates to devices for moving cars of the class which are adapted to engage the rail, and which are provided with a lever adapted to be placed between the car-wheel and the rail to move the car, the part engaging the rail forming a fulcrum for the lever. Various devices of this general character have been known, but all have failed to a greater or less extent to meet the requirements of a practical device, and it has been my aim to overcome the difficulties which have heretofore existed, so as to add to the efficiency of the device without increasing the number of parts, and at the same time provide such an arrangement of the few parts comprising the device as to prevent excessive wear, and thus prolong the time that the device may be used without repair.

My invention consists of a fulcrum-plate adapted to rest upon the rail, a lever being pivoted thereto with a gripping-point located at the rear end of said plate, and a spring interposed between it and the other end for keeping the gripping-point out of contact with the rail, except when in use.

In the accompanying drawing the figure represents my invention in perspective.

Prior to my invention it has been suggested to construct a car-mover of a fulcrum-plate adapted to engage the rail, the said plate carrying a lever which is pivoted thereto; but so far as I am aware the gripping parts of the fulcrum-plates of such car-movers have been so located as to be subjected to great wear, needing frequent repairs, and for this reason serious objection has been made to them.

In the accompanying drawing, A represents the fulcrum-plate which has a tapering front part *a*, which is adapted to rest upon the upper surface of the rail to provide a firm bearing, and this part is provided with wings *c*, which extend down upon each side of the rail to keep the fulcrum plate or shoe in place

during operation. Lugs *d* project from the upper surface of the shoe, and between these lugs the body of the lever B passes, a pin *e* passing through the lugs and the lever and serving as a fulcrum.

It is necessary to provide means to hold the shoe against slipping when power is applied to move the car, and this is done by extending the shoe downwardly at its rear and forming it into a sharpened point or edge *b*, which is adapted to engage the upper face of the rail and prevent any slipping movement. If the point were always in engagement with the rail, it would soon be dull, and in order to keep it clear of the rail, except when in actual use, I make the under face of the shoe concave, and in the concavity arrange a spring *a'*, one end of which is connected with the shoe and the other end is curved downwardly to engage the rail, and the action of this spring tends to keep the edge or point constantly raised from the surface of the rail, except when the tension of the spring is overcome by power applied to the lever. It will thus be seen that there is absolutely no wear on the point or edge *b*, except that which occurs from downward pressure, and that all sliding movement over the surface of the rail is prevented by the lifting action of the spring *a'*. I have found in practice that this construction is very effective and that the device may be operated for a long time without requiring any repair whatever.

What I claim is—

In combination, the lever, the shoe formed in one piece with upwardly-projecting ears, said shoe having at its front end a pair of lateral lugs to embrace the upper part of the rail, the rear end of said shoe being free from said lateral lugs and having a biting-point to engage only the upper face of the rail, and a spring between the front end of the shoe and the biting-point, said spring being free from lateral projections and bearing upon the upper part of the rail only.

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

EDWARD A. MUNSON.

Witnesses:

E. H. HUNT,  
JOHN A. KLISE.