No. 792,107. PATENTED JUNE 13, 1905.

J. E. ANDERSON.

CAR MOVER.

APPLICATION FILED FEB. 23, 1905.

Fig. 1.

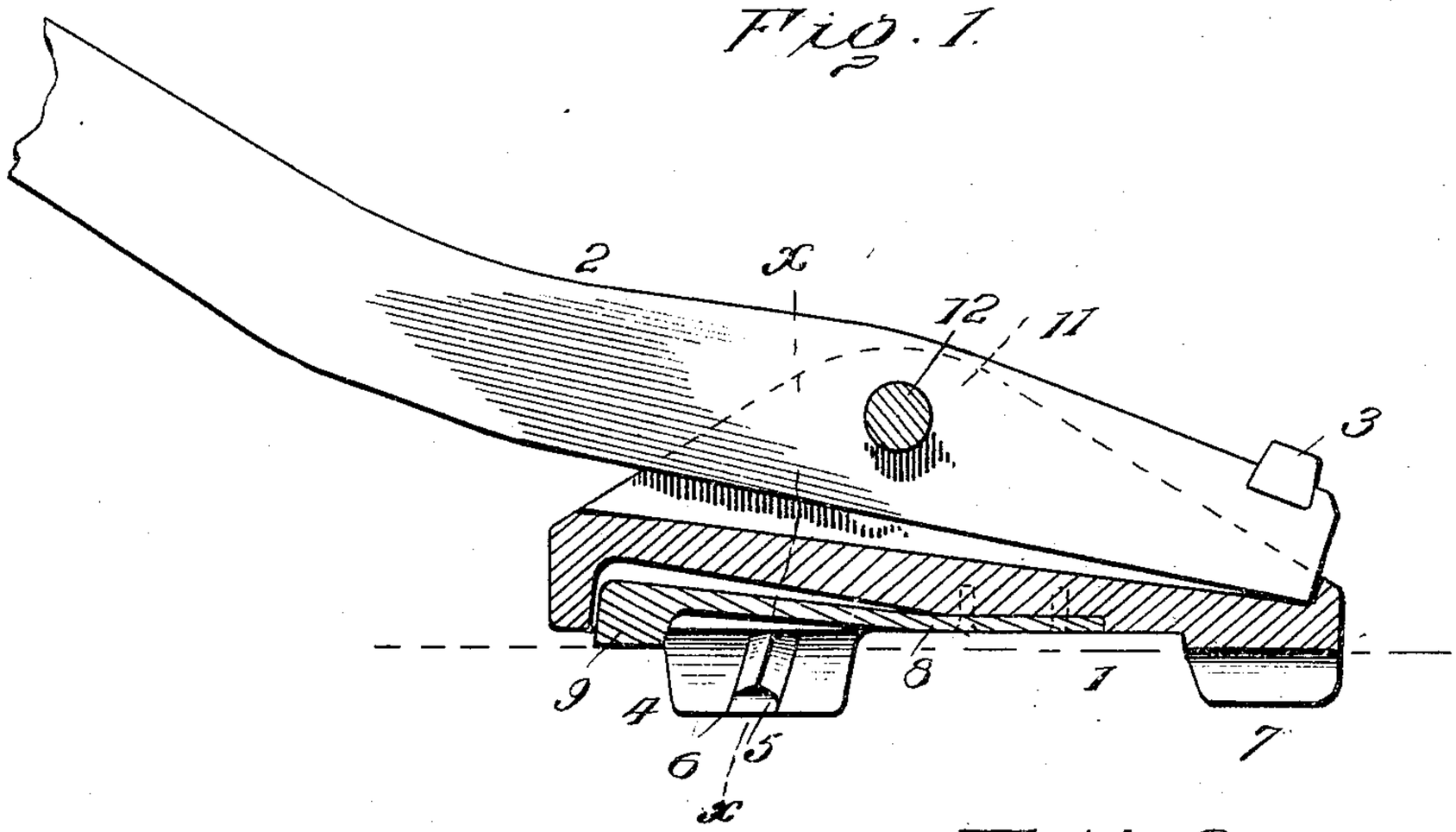


Fig. 2.

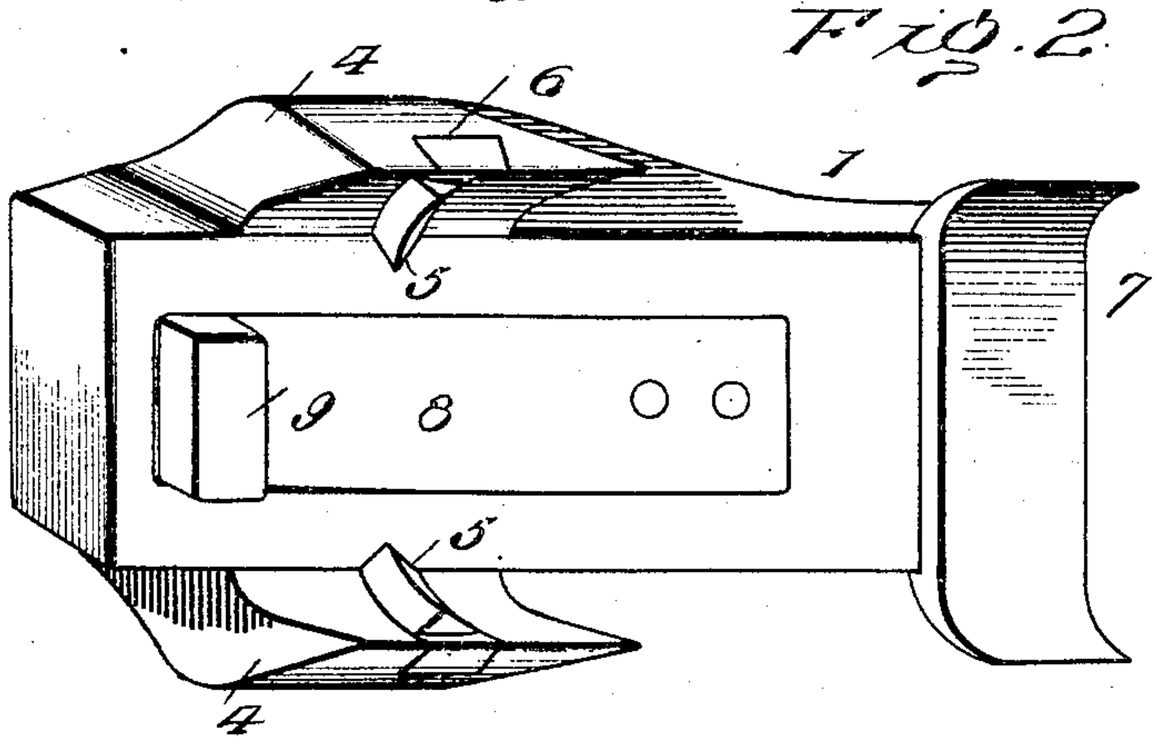
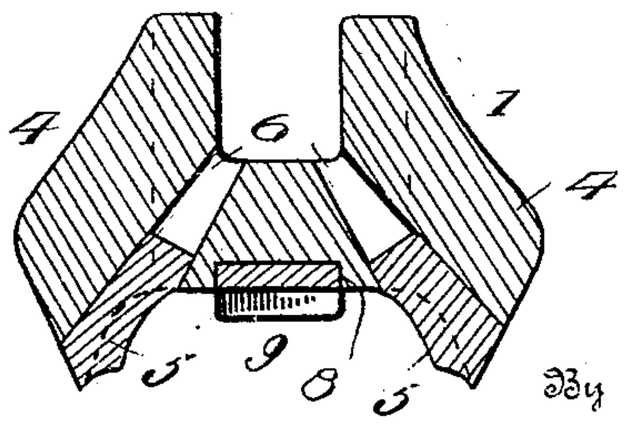


Fig. 3.



Witnesses

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No. 792,107. Patented June 13, 1905.

UNITED STATES PATENT OFFICE.

JOHN E. ANDERSON, OF CLOQUET, MINNESOTA.

CAR-MOVER.

SPECIFICATION forming part of Letters Patent No. 792,107, dated June 13, 1905.

Application filed February 23, 1905. Serial No. 246,961.

To all whom it may concern:

Be it known that I, JOHN E. ANDERSON, a citizen of the United States, residing at Cloquet, in the county of Carlton and State of Minnesota, have invented certain new and useful Improvements in Car-Movers, of which the following is a specification.

This invention provides a pinch-bar or load-moving device of simple construction, designed most especially for shifting cars or like heavy rolling-stock, the purpose being to devise a novel form of shoe and coöperating rail-gripping devices for preventing backward slipping of the shoe when the lever is actuated to advance the load.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a longitudinal section of the shoe of the device, showing the lever in full and having a portion broken away. Fig. 2 is a perspective view of the mover lying on its side and having the outer end portion of the lever broken away. Fig. 3 is a cross-section on the line *x x* of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The mover comprises, essentially, two parts, a shoe 1 and an operating-lever 2, the latter being fulcrumed to the shoe near one end. A bit or dog 3 is fitted to the end portion of the lever designed to sustain the load and is of highly-tempered steel, so as to preserve a biting edge and prevent slipping. The bit or dog 3 is fitted in a groove or seat formed transversely of the lever, thereby admitting of its substitution or removal for sharpening or for other cause when required.

Lugs 4 are provided at opposite sides of the shoe near its rear end and are adapted to embrace opposite sides of the head or ball of the rail to prevent lateral displacement of the shoe when fitted upon a rail. Teeth 5 are provided upon the inner sides of the lugs 4 to bite into the rail and prevent possible slipping of the shoe when bearing down upon the lever to lift the load or force the car forward. The teeth 5 preferably incline rearwardly and downwardly, so as to facilitate the advance of the shoe after each operation, yet offer a firm resistance to rearward movement of the shoe. The teeth 5 are of highly-tempered steel and are preferably detachably fitted to the shoe, so as to be replaced when worn or admit of their sharpening when dull. Openings 6 are formed in the lugs and shoe for reception of the teeth 5, said openings being upwardly converged and tapered and approximately of wedge form in cross-section to firmly and securely hold the teeth in place. The tapered form of the teeth limits their upward movement, and the wedge form in cross-section prevents their possible turning in the openings 6 when subjected to strain. Access may be had to the upper ends of the openings 6 for the insertion of a drift or like tool to facilitate the removal of the teeth when required for any purpose.

The shoe 1 is provided at its front end with a pendent portion 7, whose end portions project beyond the sides of the shoe and are downwardly curved, so as to embrace opposite sides of the head of the rail, and in conjunction with the lugs 4 hold the shoe upon the rail against possible lateral displacement. The pendent portion 7 constitutes a rider upon which the shoe skids when moved upon the rail, and the projecting end portions constitute lugs or retainers to hold the shoe in proper position.

A spring-rider is provided at the rear end of the shoe and consists of a block 8 and spring 9, the latter being folded or otherwise fastened at its forward end to the shoe and having its rear end free and carrying the block 8. A recess 9 is formed in the under side of the shoe 1 to receive the spring and block, said recess being deepened at its rear

end to admit of ample movement of the spring and block, whereby the latter may be forced into the shoe to admit of the teeth 5 biting into the rail when pressure is applied to the lever 2 for raising or shifting the load. When the lever is relieved of pressure, the spring 9 presses the block 8 downward from the shoe and raises the latter at its rear end a distance to enable the teeth 5 to clear the rail, whereby the shoe may be easily moved forward to a new position without impairing the biting edges of the teeth, as would result if the same were permitted to slide upon the rail. The spring 9 is let into the shoe so as to come about flush with the under side thereof.

The upper side of the shoe is recessed or provided with ears 11, transversely spaced to receive the lever 2, said ears being apertured to receive a pivot-pin 12, upon which the lever 2 is mounted. Lugs 4 brace and strengthen the ears 11.

Having thus described the invention, what is claimed as new is—

1. A load-mover comprising a shoe, an operating-lever fulcrumed thereto, and a spring-rider applied to the under side of the shoe and comprising a spring and a block, the latter sustaining the wear and providing the necessary rise for the shoe.

2. In a load-mover, the combination of a shoe, an operating-lever fulcrumed thereto, teeth at opposite sides of the shoe for preventing slipping thereof, and a spring-rider arranged intermediate of said teeth.

3. In combination, a shoe provided with side lugs and having upwardly-converged openings, teeth insertible in said openings, and an operating-lever fulcrumed to the shoe.

4. In combination, a shoe provided at one end with a pendent portion having projecting parts curved to embrace opposite sides of the head portion of a rail, lugs at the sides of the opposite end portions of the shoe, teeth insertible in openings formed in said lugs and shoe, a spring-rider fitted in a recess in the under side of the shoe, and a lever fulcrumed to the shoe, substantially as set forth.

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

JOHN E. ANDERSON. [L. S.]

Witnesses:
J. A. FESENBECK,
JACOB B. TORIO.