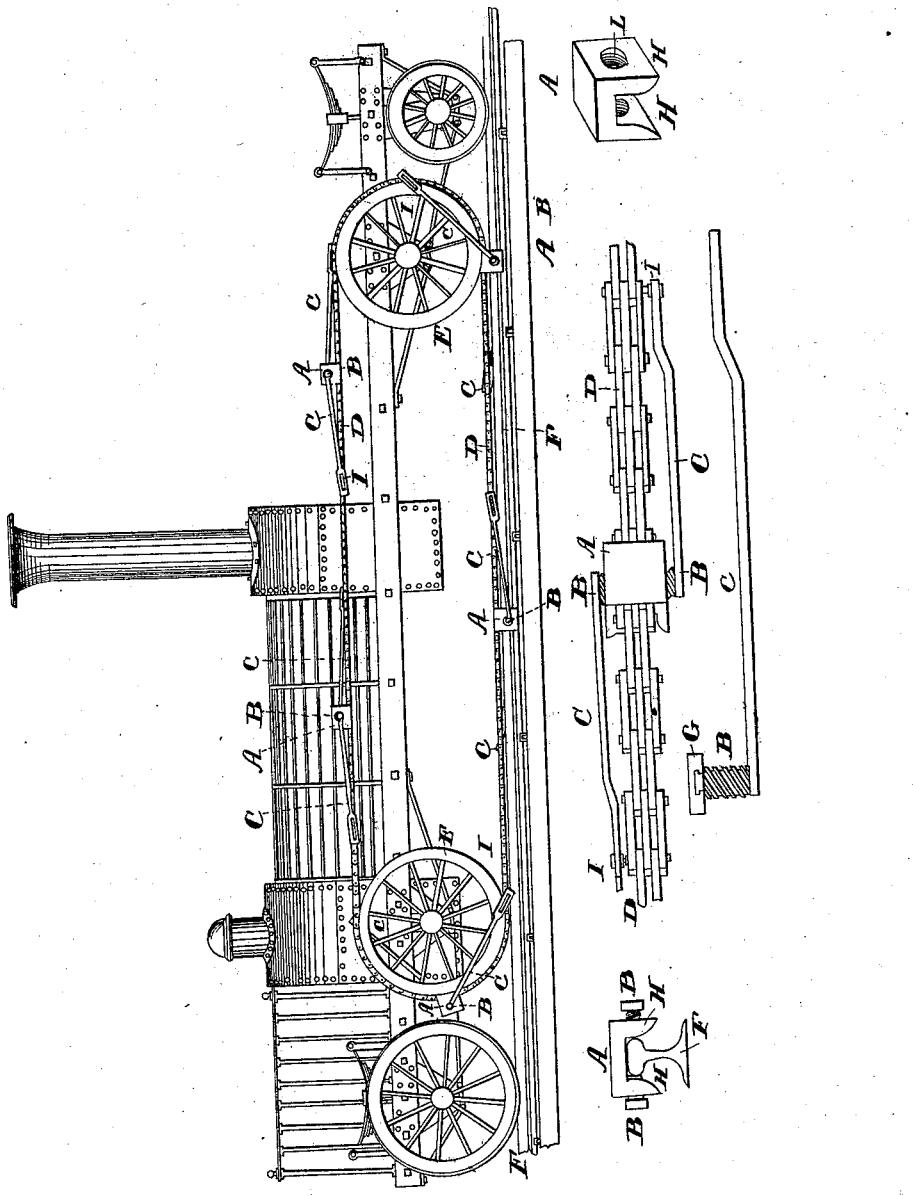
STEVENS & PITCHER.

Traction-Wheel.

No. 4,908. Patented Dec. 28, 1846



Inventors

Richard A. Stevens

Lemuel Pitcher

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RICHARD F. STEVENS AND LEMAN B. PITCHER, OF SYRACUSE, NEW YORK.

MACHINERY FOR ASCENDING INCLINED PLANES.

Specification of Letters Patent No. 4,908, dated December 28, 1846.

To all whom it may concern:

Be it known that we, RICHARD FIELD STEVENS and LEMAN BAKER PITCHER, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Locomotives, the purpose of which is to give them a constant and firm hold upon the rails of railroads in order that they may proceed at all times with heavy loads upon level or inclined planes; and we do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

Our invention consists in the application to the wheels E of locomotives, of an endless chain D combined with grippers, clamps, or catches A in such a manner that they will be fastened to the rail F under the foremost wheel E, and released under the backmost E by the revolution of the wheels E in whichever direction they may be running.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We construct two wheels E of any convenient diameter, which we attach to locomotives, placing one E before the other E, and both in a line over the rail F. We then construct an endless chain D of any of the known or convenient forms, which we place upon or around the said wheels E. We then construct grippers, clamps, or catches A, which we attach to the said chain D, with jaws or lips H, to project down the sides of the rail F, on which they are to act. Through each jaw or lip H a screw B is made to work against or from the side of said rail F. To the outer end of each screw B a lever C is attached at right angles. The outer end of each lever C is attached to the chain D forward or back of the grippers A, in such a manner that they C work the screw B by rising and falling on the curve of the wheel E, the end of the screws B working in contact with the sides of the rails F. Other forms of grippers A, may be constructed in which the jaws H may be made movable, and constitute a part of the chain D.

The chain D, combined with the grippers A, may be attached to locomotives for the purpose of aiding in propelling, and it may also be applied to the wheels of cars for the purpose of checking, and regulating their speed.

The operation of our invention is as follows: By the revolution of the wheels E, the chain D, and grippers A, are made to revolve, being placed over and around said wheels E. As the grippers A come down from over the wheel E the jaws H project down the sides of the rail F. The levers C work the screws B against the sides, and the whole thus becomes firmly attached to the rail F. By the rising of the chain D upon the backmost wheel E, the levers C are raised, the screws B are reversed, and the grippers A released from their hold upon the rail F; they are then carried forward by the revolution of the wheels E, to seize the rail F again at another point.

What we claim as our invention, and desire to secure by Letters Patent is,

The combination of grippers, clamps, or catches A with the endless chain D as described, in such a manner, that they will seize the rail F as they come down from over the front wheel E, and release it as they rise upon the rear wheel E, for the purpose, and substantially as described.

RICHARD FIELD STEVENS,
LEMAN B. PITCHER,

Witnesses:
G. W. DYAR,
O. S. SUMMER.