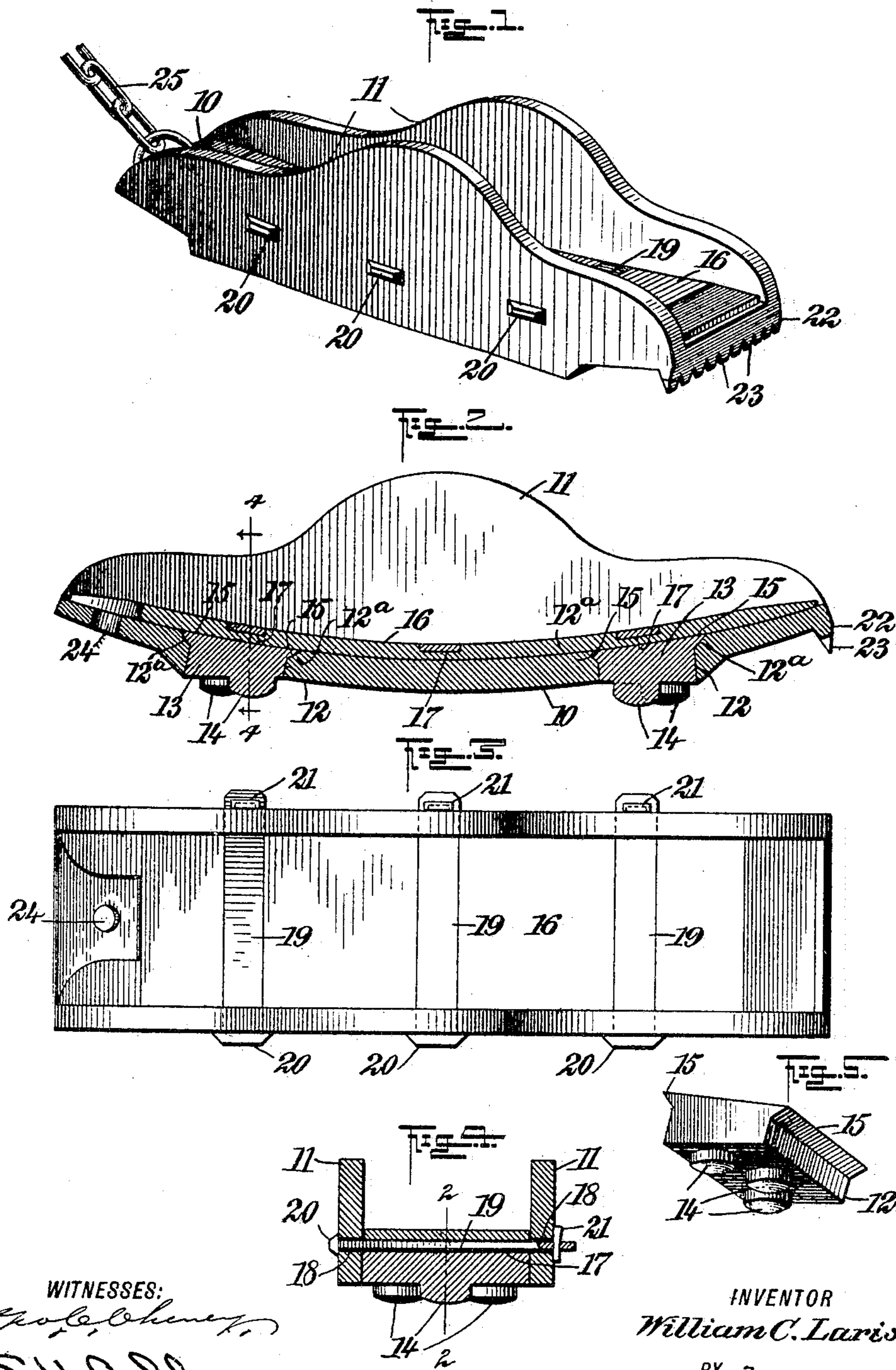


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W. C. LARISON.  
LOCK SHOE.

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WITNESSES:  
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## UNITED STATES PATENT OFFICE.

WILLIAM CLYDE LARISON, OF BLOSSBURG, PENNSYLVANIA.

## LOCK-SHOE.

SPECIFICATION forming part of Letters Patent No. 782,036, dated February 7, 1905.

Application filed August 26, 1904. Serial No. 222,245.

*To all whom it may concern:*

Be it known that I, WILLIAM CLYDE LARISON, a citizen of the United States, and a resident of Blossburg, in the county of Tioga and State of Pennsylvania, have invented a new and Improved Lock-Shoe, of which the following is a full, clear, and exact description.

My invention relates to lock-shoes such as are applied to wagon-wheels to prevent slipping. Its principal objects are to provide an efficient and durable device of this character.

It consists in the various features and combinations hereinafter described and more particularly claimed.

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

Figure 1 is a perspective view of one embodiment of my invention. Fig. 2 is a longitudinal section on the line 2 2 of Fig. 4. Fig. 3 is a top plan view. Fig. 4 is a transverse section on the line 4 4 of Fig. 2, and Fig. 5 is a perspective view of one of the engaging members.

10 designates a main plate, which is preferably curved upon the arc of a circle to substantially conform to the periphery of the wheel to which it is to be applied. At each side of this plate is a retaining wall or flange 11, conveniently formed integrally therewith and shown as inclined or curved from a central point of maximum height. In the main plate, extending from flange to flange, are openings 12, here shown as two in number, which are preferably widened at their inner sides by opposite inclined walls 12<sup>a</sup> 12<sup>b</sup>. Through these openings extend engaging members 13, which have formed upon or secured to their lower faces calks or engaging projections 14, which preferably have somewhat rounded ends. At the inner extremities of these engaging members are inclined flanges or enlargements 15, coacting with the walls 12<sup>a</sup> and holding the members against outward movement. As illustrated, they are retained against movement in the opposite direction by a locking-plate 16 common to all, which is curved to conform to the main plate and is of such a width as to fit between the side flanges.

In the inner side of this plate are shown three recesses 17, which may be brought into alignment with pairs of opposite openings 18 18, formed in the flanges. Through the openings and recesses pass keys or locking members 19, which at one end have heads 20, located outside the walls 11, and at the opposite ends openings to receive securing-pins 21. At one extremity of the main plate, which would be the rear as the device is in place upon the wheel, is preferably formed a rib 22, having reduced or comparatively sharp teeth 23. At the opposite end of the main plate is an opening 24, to which may be attached a chain 25 for connection to the draft-gear or other portion of the vehicle. The lower face of the main plate is shown as upwardly inclined at each end from the engaging members.

In use the shoe is placed beneath the wheel which it is to lock and the chain attached as desired to some portion of the vehicle, the side walls of the plate retaining it against movement laterally of the wheel. Then if there is any tendency of the latter to slip or skid upon ice or inclined surfaces the engaging projections will grip and tend to prevent this, their rounded form avoiding an unduly positive checking of the advance of the vehicle. If the wheel runs in the shoe, slipping under this action will be avoided by the bringing of the teeth of the rib 22 into contact with the supporting-surface, their sharp edges at once stopping this movement. When the engaging projections are worn, they may be readily renewed by taking out the keys, thus freeing the plate and enabling the engaging members to be lifted out between the side walls. Fresh ones may then be applied and secured in place by reversing these operations. This renders the other portions of the shoe practically indestructible.

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

1. A lock-shoe comprising a main plate, retaining members carried thereby, a plurality of independent engaging members separably connected with the plate, and means common to all for securing the engaging members in place.

2. A lock-shoe comprising a main plate, rounded engaging projections situated between the ends of the plate, and a transverse series of sharp projections at the extremity of

5 said plate.

3. A lock-shoe comprising a main plate having openings, engaging projections extending through the openings and having enlargements at the inner side of the plate, and

10 a locking-plate coacting with the inner ends of the projections.

4. A lock-shoe comprising a main plate having openings, engaging projections extending through the openings and having enlargements at the inner side of the plate, a

15 locking-plate coacting with the inner ends of the projections, and keys for securing the plate in place.

5. A lock-shoe comprising a main plate

20 having openings, engaging projections extending through the openings and having enlargements at the inner side of the plate, a locking-plate provided with recesses coacting with the inner ends of the projections, and

keys lying within the recesses and serving to 25 secure the plate in place.

6. A lock-shoe comprising a main plate having an opening and being provided with opposite flanges in which are alined openings, an engaging projection extending through the

plate-opening, and a key extending through 30 the flange-openings and serving to secure the projection in place.

7. A lock-shoe comprising a main plate having an opening and being provided with

opposite flanges in which are alined openings, an engaging projection extending through the

plate-opening, a locking-plate contacting with the inner end of the engaging projection, and

a key extending through the flange-openings 40 and contacting with the locking-plate.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM CLYDE LARISON.

Witnesses:

J. R. STRATTON,

JOHN B. BOWER.