No. 733,543. PATENTED JULY 14, 1903.

W. L. DENSON.

LOCK SHOE.

APPLICATION FILED AUG. 9, 1902.

NO MODEL.

Fig. 1.

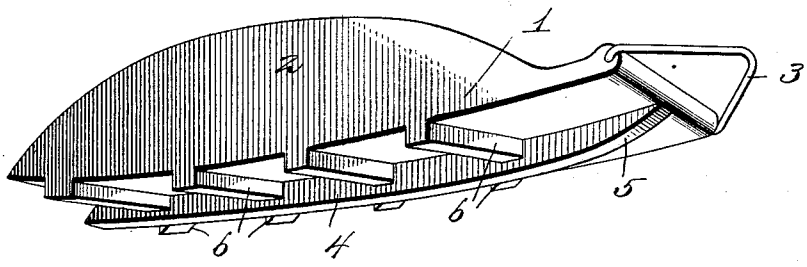


Fig. 2.

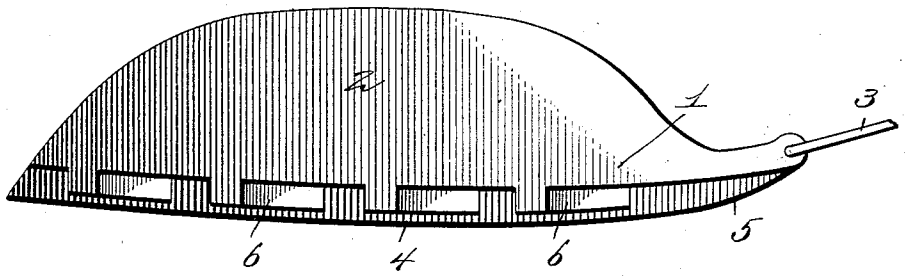
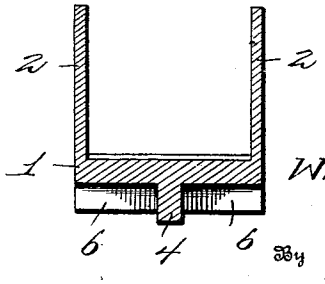


Fig. 3.



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THE NORRIS PETERS CO. PHOTO-LITHO., WASHINGTON, D. C.

No. 733,543. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM L. DENSON, OF ELMIRA, NEW YORK.

LOCK-SHOE.

SPECIFICATION forming part of Letters Patent No. 733,543, dated July 14, 1903.

Application filed August 9, 1902. Serial No. 119,062. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. DENSON, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented new and useful Improvements in Lock-Shoes, of which the following is a specification.

This invention relates to lock-shoes for use on wagon-wheels in locking the latter while moving downwardly over hills; and the object of the same is to provide a shoe which will prevent the wagon from sliding sidewise on icy or laterally-inclined roadways and overcome the serious damage often resulting from a wagon sliding around and tipping over, the present form of shoe also being adapted to form a rough-lock without the use of a chain, and the consequent injury to the felly of the wheel as in the use of the old form of rough-lock.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a lock-shoe embodying the features of the invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse vertical section thereof.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The improved form of shoe comprises a base-plate 1, which is curved longitudinally to conform to the curvature of a wheel. Rising from the opposite portions of the base-plate are side flanges 2, which serve as guards to prevent the wheel in engagement with the base-plate from sliding off the latter. The side flanges or guards 2 extend downwardly at the rear in curved beveled planes to the end of the base-plate 1 and also have a similar construction at the front of the shoe, but terminate in rear of the front end of the base-plate 1, so as to have a part of the latter project in advance of the wheel engaging the same. The front end of the base-plate 1 has a draft-link 3 movably mounted therein for connection of a chain or analogous device running from the draft gear or devices in advance. Extending longitudinally of the central portion of the under side of the base-plate 1 is a rib 4, which is curved upwardly, as at 5, toward the base-plate at the front end to avoid the formation of an obstructing angle or abutment. On the under side of the said plate 1 are supplemental ribs or diggers 6, which project obliquely from the opposite sides of the rib 4 to the outer sides of the base-plate. The rib 4 extends below the ribs 6, and the latter are arranged obliquely, as set forth, to overcome the material obstruction that would exist if the said ribs stood outwardly in planes at right angles to the ribs 4.

The shoes are applied to the wheels by causing the latter to run into the space between the guards 2 and bear upon the base-plate 1, the draft-links 3 then being connected up as required. The weight of the wagon and the load thereon will cause the rib 4 to sink into the surface of the road-bed or ice or snow and provide a firm hold to prevent the wagon to which the shoes are applied from sliding or slewing sidewise and overcoming any tendency to breakdowns, tip-overs, and other serious accidents. The ribs 6 dig into the road-bed or ice or snow covering the latter and form a rough-lock, thus holding heavily-loaded wagons on steep hills in perfect safety and security and under control of a driver. It will be understood that the more weight there is on the wagon the firmer the shoe will grip into the road-bed.

The shoe is made in one piece of material and preferably formed by casting on a chill, thereby making the ribs and wearing parts practically as hard as steel and strong and durable.

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

A lock-shoe of the class set forth, comprising a base-plate curved longitudinally to conform to the curvature of a wheel adapted to be disposed therein and having oppositely upwardly projecting flanges to form guards, a longitudinal rib depending from the center of the under side of the said base-plate and

extending fully from the front end to the rear end of the base-plate, and supplemental ribs extending outwardly in reverse lateral planes from opposite sides of the longitudinal rib and terminating coincidently with the outer surfaces of the guard-flanges, the supplemental ribs being disposed obliquely in a rearward direction and having a less depth than the said longitudinal rib, all of the said parts being of integral construction.

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

WILLIAM L. DENSON.

Witnesses:
HOWARD E. BAKER,
WILLIAM J. BARTER.