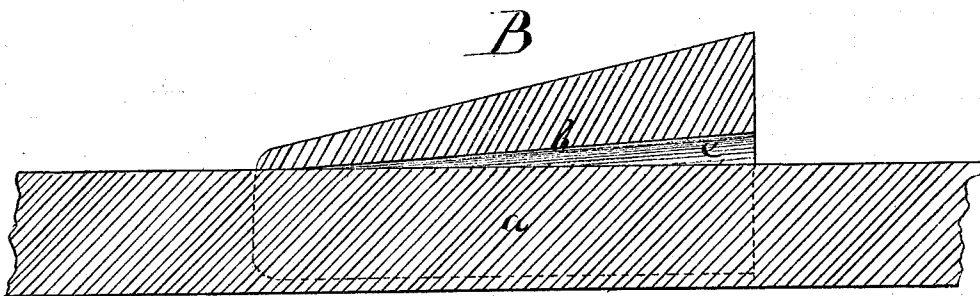
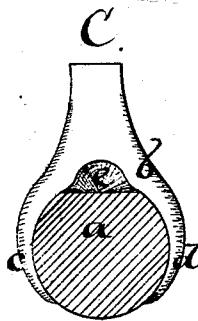
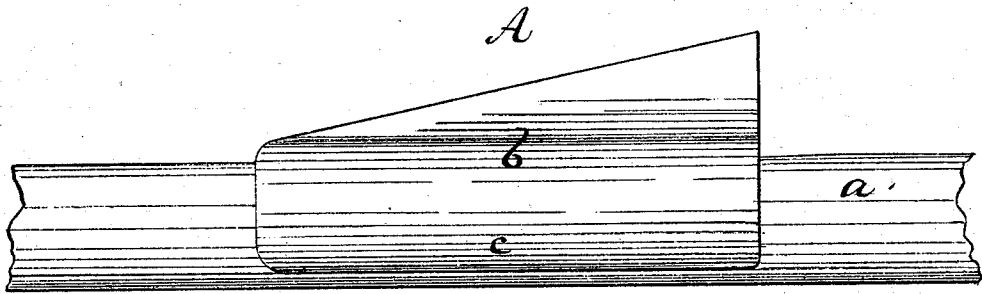


A. G. Porter.
Carriage Shaft Protector.

116486

PATENTED JUN 27 1871



Witnesses.
Mr. W. Frothingham,
S. B. Hildet,

A. G. Porter,
By his Attys.
Crosby & Gould.

UNITED STATES PATENT OFFICE.

AHIRA S. PORTER, OF NORTH BRIDGEWATER, MASSACHUSETTS.

IMPROVEMENT IN SHAFT-PROTECTORS.

Specification forming part of Letters Patent No. 116,486, dated June 27, 1871.

To all whom it may concern:

Be it known that I, AHIRA S. PORTER, of North Bridgewater, in the county of Plymouth and State of Massachusetts, have invented an Improved Shaft-Protector; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In stables, carriage-repositories, and other places where carriages are collected, and where they have to be closely run together to economize space, the hind axle of one carriage is run over the shafts of another to bring the two bodies snugly together. The result of this often is that the axle comes into contact with the shafts over which it runs, scraping and marring the paint thereof.

To remedy this I provide elastic cushions, preferably made of caoutchouc compound, and formed to embrace the shafts, such cushions when applied receiving the contact of the axle and thereby shielding the shafts from defacement. The cushion I make long and semi-tubular, and with edges which, when pressed over the shaft, hug the shaft and hold the cushion or shield in place. On top the cushion is preferably made increasingly thick from its front to its rear end to more securely guard the shaft when the axle strikes the cushion, and to render it more certain that the axle shall strike the cushion and not the shaft. It is in such a shaft-protecting cushion or shield that my invention consists.

The drawing represents a portion of a shaft having one of my shields applied thereto. A shows the shaft and shield in side elevation. B

is a sectional elevation of them. C is a cross-section of the shaft, showing the shield in end view.

a denotes the shaft, and *b* the elastic cushion or shield. The shield, preferably made of caoutchouc compound, is formed semi-tubular or with two lips or jaws, *c d*, the inner surfaces of which fit upon the shaft, as seen at C, and by their elasticity embrace the shaft. The upper part of the shield is made thicker than the jaws, and is shown with an increasing thickness from its front to its rear end, as seen at A and B.

When the carriage is placed in the stable, carriage-house, or wareroom, or when another carriage is to be backed over its shafts, one of the cushions or shields is pressed down upon the upper part of each shaft at the height of the hind axle of the carriage to be backed over the shafts, and its jaws will embrace or take hold of the shaft surfaces and hold the shield in place. When the axle reaches the shields it strikes each of them at some point along the incline, and is thereby arrested and kept from contact with the shaft.

Between the jaws the shield may be made with a groove, *e*, to receive or cover the heads of bolts running through the shaft. These shields or cushions may be quickly applied and removed, and they are effectual in keeping the shafts from injury, in the manner described.

I claim—

An elastic cushion or shield for protecting carriage-shafts, substantially as described.

A. S. PORTER.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.