

C. H. GOULD.
Carriage Steps.

No. 137,547.
Fig. 1.

Patented April 8, 1873.

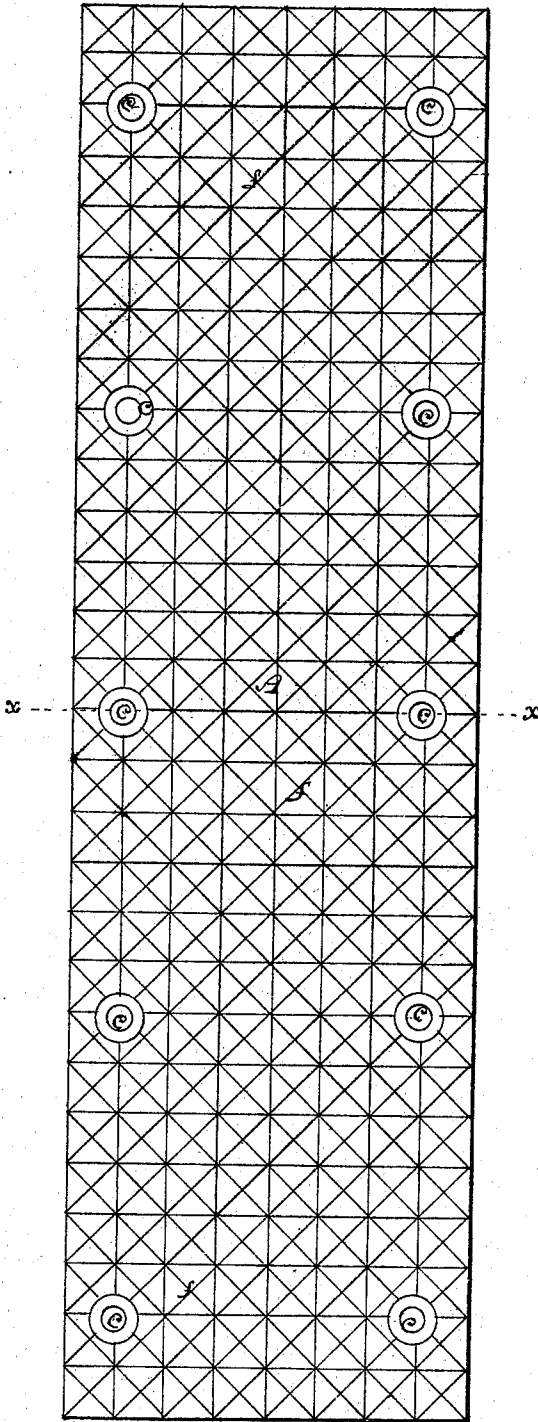


Fig. 2.

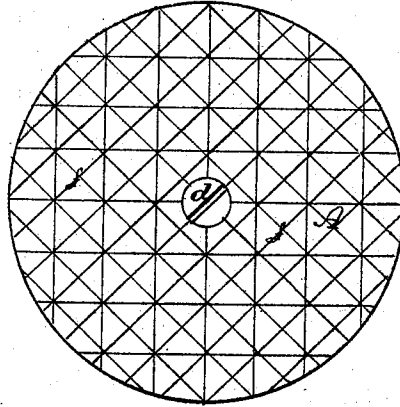
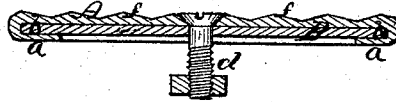


Fig. 3.



Fig. 4.



Witnesses,

J. S. Brown,
E. M. Gallaher.

Inventor,

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UNITED STATES PATENT OFFICE.

CHARLES H. GOULD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CARRIAGE-STEPS.

Specification forming part of Letters Patent No. **137,547**, dated April 8, 1873; application filed January 2, 1873.

To all whom it may concern:

Be it known that I, CHARLES H. GOULD, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Elastic Shield for the Steps of Cars and Carriages; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification—

Figure 1 being a top view of one of my improved shields for railroad-car steps; Fig. 2, a top view of one of the improved shields for carriage-steps; Fig. 3, a transverse section in a plane indicated by the line *x x*, Fig. 1; Fig. 4, a section through the center of the shield shown in Fig. 2.

Like letters designate corresponding parts in all of the figures.

In the Letters Patent granted to me September 20, 1870, for an improved shield for carriage-steps, the India-rubber or equivalent elastic shield fits over and around the edge or edges of a metallic disk or plate, so that when the disk or plate is applied to the carriage-step the edges of the shield come between the disk or plate and step, and thereby not only are held securely, but give additional elasticity and softness to the step.

My present invention consists in the combination, with the India-rubber or equivalent elastic substance or composition which forms the shield proper, of a sheet or disk of leather-board, or equivalent flexible, elastic, fibrous material, to form the body or foundation for keeping the shield in shape and securing it firmly to the step.

The advantages over the metallic plate or disk of the leather-board for the purpose are, first, its flexibility and readiness of adaptation to the surface of the step, however uneven or irregular, being at the same time sufficiently rigid and firm to keep the shield in shape and position on the step; second, its entire freedom from liability to cut through the shield at the edges, as the metallic plate is liable to do; third, its greater lightness; fourth, its greater cheapness.

In the accompanying drawing, A repre-

sents the shield of vulcanized India-rubber or equivalent elastic substance or composition, and B the body, of leather-board or equivalent elastic, flexible, but firm, light, fibrous material. The leather-board is preferred to any other material, since it possesses the advantages recited in a higher degree than any other substance known to me. The shield A is (preferably) molded and pressed around the sheet or disk B, and vulcanized while in the press. Its edges *a a* fit around and under the edge or edges *b b* of the sheet or disk, and lap an inch, more or less, upon the under surface thereof. The sheet or disk may have about the same form and size as the car or carriage step, being oblong, round, or of any other shape required. Countersunk holes *c c* are molded or formed in the shield and disk or sheet of leather-board, for receiving screws or other means to fasten the shield to the step. Thus screw-bolts, as at *d*, Fig. 4, of any length required, may be used, an advantage over permanently-attached screws, as in my former patent.

The shield is covered with a water-proof varnish, which renders the under side of the leather-board impervious to water.

The upper surface of the shield A is, or may be, formed with projections *f f*, or otherwise roughened, as an additional safeguard against slipping. This shield is also applicable to the steps of steamboats and buildings, and especially in places exposed to rain, snow, or wetness in any way.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the India-rubber or equivalent elastic shield A with the sheet or disk B of leather-board or equivalent flexible fibrous material, composing an elastic shield for car and carriage steps, substantially as herein specified.

Specification signed by me this 26th day of November, 1872.

CHARLES H. GOULD.

Witnesses:

JOSIAH W. HUBBARD,
LUTHER C. CROWELL,