## D. J. HENDRICKSON.

## SLEIGH AND SHOE.

No. 187,273.

Patented Feb. 13, 1877.

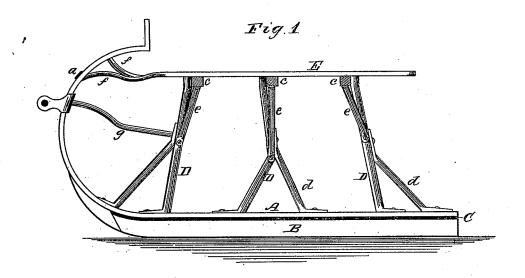


Fig. R.

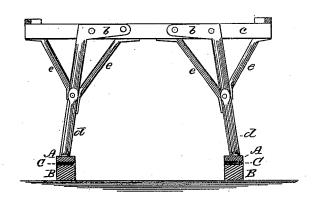
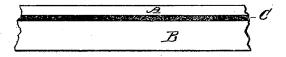


Fig.3.



WITNESSES

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## UNITED STATES PATENT OFFICE.

DARIUS J. HENDRICKSON, OF WEST MEREDITH, NEW YORK.

## IMPROVEMENT IN SLEIGHS AND SHOES.

Specification forming part of Letters Patent No. 187,273, dated February 13, 1877; application filed August 24, 1876.

To all whom it may concern:

Be it known that I, DARIUS J. HENDRICKSON, of West Meredith, in the county of Delaware and State of New York, have invented
a new and valuable Improvement in Sleighs;
and I do hereby declare that the following is
a full, clear, and exact description of the construction and operation of the same, reference
being had to the annexed drawings, making a
part of this specification, and to the letters
and figures of reference marked thereon.
Figure 1 of the drawing is a representation

Figure 1 of the drawing is a representation of a side elevation of my invention. Fig. 2 is an end view of the same. Fig. 3 is a view on an enlarged scale, showing the runner, shoe,

and packing.

This invention is in the nature of an improvement in the construction of sleighs, and consists in interposing between the shoe and runner a packing of flexible material, so that the shoe will yield when passing over any rough or rocky surface, and thereby prevent the danger of its breaking. My invention further consists, in connection with the packing interposed between said shoe and runner, in the peculiar construction of the frame and brace-rods, as will be hereinafter described, and subsequently pointed out in claim.

In the accompanying drawing, A represents the runner of a sleigh, preferably of wroughtiron, and B represents the shoe, which I construct of cast-iron. Between the runner A and the shoe B is interposed a flexible packing, C, of rubber, cork, or other suitable material, which allows the shoe to yield when passing over hard and rocky substances, thereby preventing the shoe from becoming broken or otherwise injured. The runners A are, at their front ends, curved in an upward direction, and are braced by a rod or bar, a, connecting the two by suitable bolts or nuts. To the upper surface of the runner A are secured, by rivets or other suitable means, braces D, being formed at their upper ends with

right-angle plates b, for securing them to the sides of the cross-beams c. Bolted or riveted to these braces D are short braces d, the lower end of the same being secured by bolts to the upper surface of the runner A, and its other end to the brace D near its center. Additional rods e are employed to form a perfect frame-work of the desired strength, and their lower ends are secured to the braces D, while the upper ends are bolted to the under sides of the cross beams c. Secured upon the upper surfaces of the cross-beams c, and near their ends, are fenders E, their front ends being bifurcated or forked, as shown at ff. These rods f f are secured by bolts to the curved ends of the runners A. Additional brace-rods g connect the curved end of the runner with the front braces D. By this construction a strong and durable frame-work is obtained, and which, together with the packing between runners and shoes, form a sleigh capable of standing without injury the ordinary inequalities of the road.

Having now fully described my invention, what I claim, and desire to secure by Letters

Patent, is-

1. In a sleigh, the combination of the runner, shoe, and a packing of suitable flexible or elastic material interposed between the runner and shoe, substantially as and for the purpose set forth.

2. The frame, consisting of the cross-beams c, fenders E, having bifurcated ends ff, and the braces D, rods d e g, runner A, shoe B, with packing C, constructed and arranged as

specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DARIUS J. HENDRICKSON.

Witnesses:

ALBERT STILSON, M. D. KELLOGG.