

(No Model.)

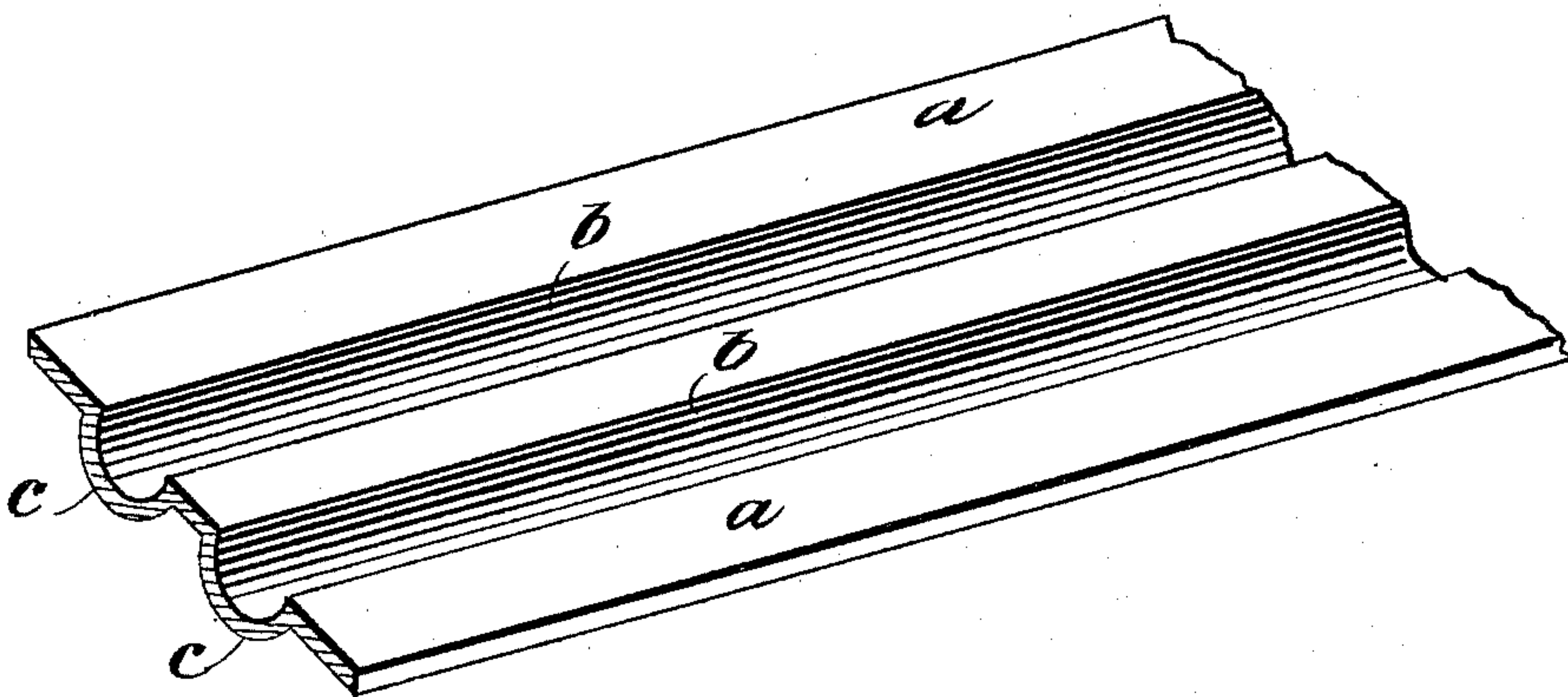
H. A. MORRELL.

SLEIGH SHOE.

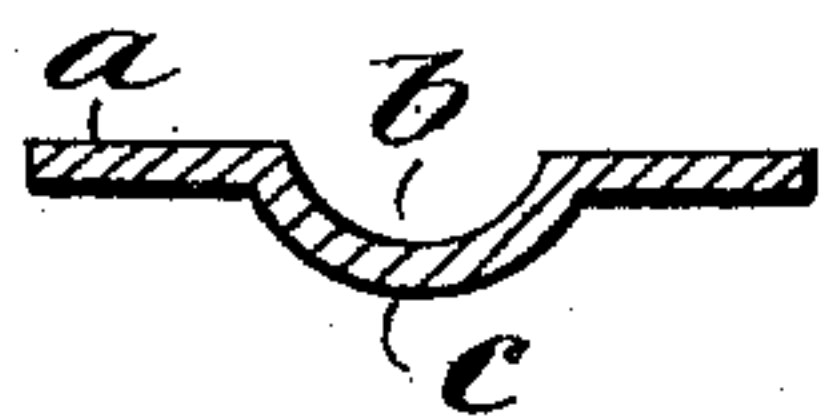
No. 302,762.

Patented July 29, 1884.

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES:

*Francis McArdle*  
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# UNITED STATES PATENT OFFICE.

HENRY A. MORRELL, OF PITTSFIELD, MAINE.

## SLEIGH-SHOE.

SPECIFICATION forming part of Letters Patent No. 302,762, dated July 29, 1884.

Application filed March 19, 1884. (No model.)

*To all whom it may concern.*

Be it known that I, HENRY A. MORRELL, of Pittsfield, in the county of Somerset and State of Maine, have invented a new and Improved Sled-Runner Shoe, of which the following is a full, clear, and exact description.

My invention consists of a sled-runner shoe having one or more longitudinal ridges along the lower side or bottom of the shoe, the objects being to prevent the sled from sliding laterally on roads sloping sidewise, and to enable the sled to run with less friction, and thus draw easier, as hereinafter fully described.

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

Figure 1 is a perspective view of a short section of a sled-shoe having a couple of ridges along the bottom side, as I propose for wide shoes. Figs. 2, 3, and 4 are cross-sections of different shoes, showing modifications of the ridges.

Sleds having flat shoes slide about from side to side of the road, according as the road-bed slopes to one side or the other, as most country-roads do, owing to being higher in the middle, so that the draft is much harder, and the strain on the sleds is sometimes very severe, frequently causing damage to them, and often disarranging the load or causing it to be thrown off altogether or turned over.

I have found by the practical use of shoes properly ridged with longitudinal elevations along the bottom that such sliding about is always prevented on roads with sloping sides, and I also find that the ridges make the sled draw much easier on level roads, and especially when from rains and warm sunshine the surface of the roads have melted, leaving a coating of dung, chips, &c., over the icy surface, in which case the bearing of the ridges on the road is so narrow that the draft is thereby very much lessened, and also that the form of the ridges crushes the dirty impediments each way, so that the ridges on the shoes run

on the clear ice, the road being so hard that the flat surface of the shoe is elevated above, and does not touch the dirt, still further decreasing the draft. I make the shoes of the ordinary strap iron or steel, *a*, and form one or more ridges, *c*, in them along the bottom by bending down and leaving grooves *b* on the upper side, making the ridges oval or any other approved form in cross-section, and more or less wide and elevated, according to the circumstances of the case. If it is preferred to use thicker cast-metal shoes, the ridges may be made in the casting of the shoes, with or without the grooves on the upper side. The grooves may be rolled in the thin shoes when the ridges are raised on the bottom of the shoes, and the bottom of the runner may, if desirable, be correspondingly ridged, to receive the grooves when the shoes are fitted on, which will afford more substantial holding of the runners. These ridges and grooves make the shoes much stronger for a given thickness, and they will wear much thinner without breaking.

I am aware that a curved sled-runner shoe has been provided with a concave upper face, and with a central longitudinal projecting rib with inclined surfaces on either side of said rib, and also that the curved guiding-runner of a sled has been provided with longitudinal grooves on its under face, and I do not desire to claim such constructions as of my invention.

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

As a new article of manufacture, a sled-runner shoe provided with longitudinal grooves *b* on its upper side, the convex sides of the grooves forming the ridges *c c* on the under side of the shoe, flat spaces being left on either side of said grooves and ridges, substantially as and for the purpose set forth.

HENRY A. MORRELL.

Witnesses:

ALVAH H. COMFORTH,  
LESTER COMFORTH.