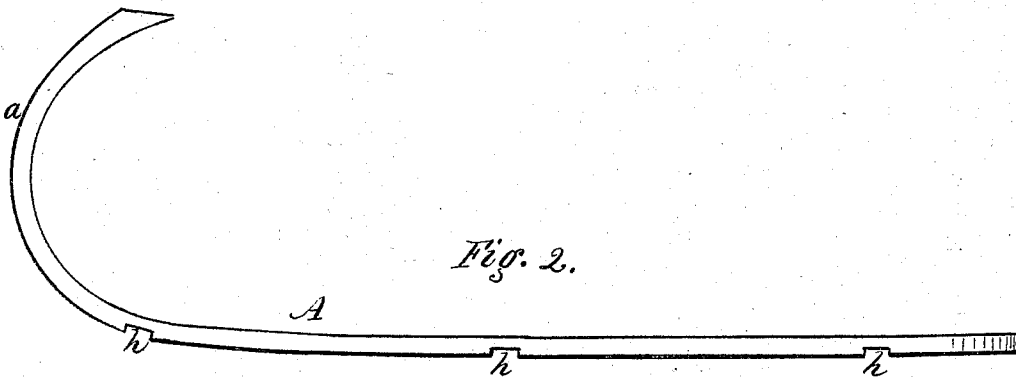
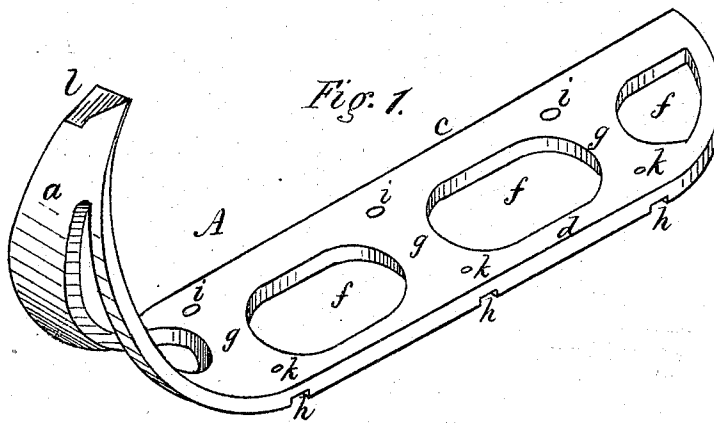


S. M. STEWART.

Combined Raves and Fenders for Sleighs.

No. 137,804.

Patented April 15, 1873



Witnesses.

Archie Paine
Dmpe. Stone

Inventor.

Saml M. Stewart,
per R. F. Osgood,
atty.

UNITED STATES PATENT OFFICE.

SAMUEL M. STEWART, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN COMBINED RAVES AND FENDERS FOR SLEIGHS.

Specification forming part of Letters Patent No. **137,804**, dated April 15, 1873; application filed December 20, 1872.

To all whom it may concern:

Be it known that I, SAMUEL M. STEWART, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Combined Raves and Fenders for Cutters and Sleighs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

My invention consists, as a new article of manufacture, of a combined rave and fender, constructed and arranged as hereinafter described.

Raves and fenders have heretofore been constructed in separate parts and bolted, screwed, or otherwise attached singly to the beams and runners. The objections to such are that they are difficult to fit and secure together, and the front and rear portions of the fender, especially the latter, project so that they become frequently broken by accident.

I avoid this by making the whole in one piece, as hereinafter described.

In carrying out my invention, I form a broad, thin, and flat piece of timber, *A*, of suitable size and length, and fashion the front and rear ends *a b* of the angular and rounded shape necessary or desirable to adapt them to use when applied. The inner straight edge *c* forms the rave, while the outer curved edge *d* forms the fender, corresponding with the similar parts in ordinary cutters or sleighs, where said parts are made separate and distinct from each other. I prefer to cut openings *f f* in the body of the wood between said parts, leaving only the bearings *g g*, which rest over the projecting cross-ribs or beams of the cutter or sleigh frame; but, if desired, the openings may not be made, but the whole wood left entire and solid. This may be desirable on heavy sleds. Beneath the bearings *g g* are made gains or mortises *h h*, extending crosswise the whole width, which fit over the cross-ribs or beams; and through the bearings, in the same line, are made holes *i k*, the first for the insertion of screws, and the latter bolts, to secure the device to said ribs or beams. The forward end of the device is also formed with a seat, *l*, which, when the rave and fender is bent in-

to form, stands in the proper inclined position to receive the upper ends of the cutter or sleigh runners, which are turned over to meet it, and are bolted or otherwise securely fastened thereto.

The device thus made is steamed and bent into proper shape over a suitable "form" or mandrel, so as to turn the front end up in curved form to receive the runners, as shown, and with the proper bend given to the body to fit upon the cross-ribs or beams of the cutter or sleigh frame. The rave and the fender are thus formed from a single piece of wood. The top of the fender, when shaped, may or may not be covered with band-iron, extending from front to rear, as an additional protection to the part having the smallest body and most exposed, and also serving as a step.

I would say, that the turn or bend given to the front end *a* may be varied more or less to adapt it to different kinds of runners; but it must turn considerably above a level.

By this construction I make the whole in one piece—steam-bent of proper form—and therefore avoid the great difficulties attending a rave and fender formed separate and bolted singly to the beams and runners. The front end *a*, especially, by being formed entire at the bend is much stronger and preserves its form and position much better than where the parts are separate, since it is very difficult to fit and to bolt such separate parts so securely at the top that they will not get out of place under strain. The making of the body of the device in one piece also gives a broad and unbroken contact with the cross-ribs of the cutter or sleigh frame at the bearings *g g*, whereas, in the old style, the points of contact are separated, and hence there is no mutual bracing action.

In addition to the above, this device is much cheaper than the old form, is much more easily applied, and presents a better appearance; being in the form of a distinct article of manufacture it may be applied directly to the cross-ribs or beams of a cutter or sleigh by screwing or bolting on without trouble or difficulty.

Having thus described my invention, I would

say that I am aware that in heavy sleds and sleighs for teaming purposes a broad cap-rail has been employed at the sides on top; but such is not the equivalent of my invention, since such does not combine a rave and fender for use on cutters, &c.; nor does it have the turn or bend in front.

I claim as my invention—

As a new article of manufacture, a combined rave and fender for the runners of sleighs, made as herein described—that is, of a single

piece of wood, steam-bent, with its front end curved to form a rest for the runner, as specified.

In witness whereof I have hereunto signed my name in presence of two subscribing witnesses.

SAMUEL M. STEWART.

Witnesses:

R. F. OSGOOD,
ARCHIE BAINE.