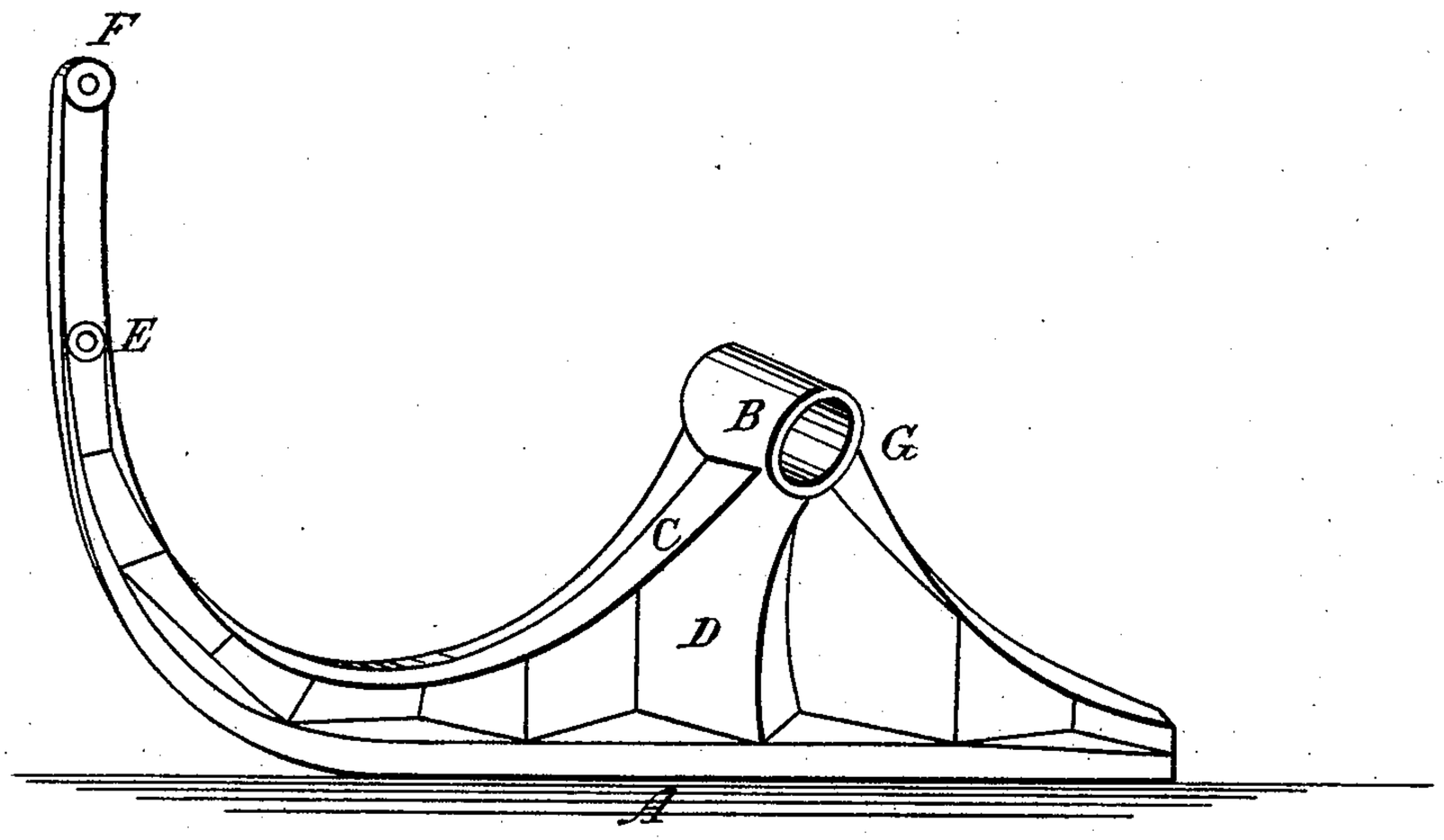
A. SPEAR.

Sleigh.

No 1,618. Patented May 25, 1840.



UNITED STATES PATENT OFFICE.

ARAUNAH SPEAR, OF BRAINTREE, VERMONT.

CONSTRUCTION OF METALLIC SLEIGH-RUNNERS.

Specification of Letters Patent No. 1,618, dated May 25, 1840.

To all whom it may concern:

Be it known that I, ARAUNAH SPEAR, of Braintree, in the county of Orange and State of Vermont, have invented a new and improved mode of constructing the running part to traverse sleds, sleighs, and stages by making the same of iron or other metal in such a manner as to possess sufficient strength, with increased durability and without the inconvenience of having it too heavy and so as to have each runner play on an axle, thereby enabling it more easily and safely to pass over obstacles and holes in the road; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in having each runner cast entire, in the following form, to wit, the lower part or shoe, as it may be termed, represented by that part of the drawing marked, A, is made of a length, width and thickness, varying according to the size of the sleigh or sled and the weight intended to be carried thereon. I usually make the sliding or straight part about two feet in length, and the rise or crook the same as sleighs of this description are made. Near the middle of the straight part of the shoe, and usually about eight inches above the same, a hub or box is placed, somewhat in the shape of the hub to a wagon, about four inches in length, represented by that part of the drawing marked, B, through which the end of the beam or axle passes. A rave, somewhat in a circular form, extends from the hub or box to the forward part of the runner, and another extends from the hub or box to the hind part of the runner, represented by those parts of the drawing marked, C. These raves, at the ends connected with the hub or box nearly correspond in width with the length of the hub or box, and gradually diminish to the width of the shoe. The shoe, hub, and raves are connected together by a panel, crossing alternately from one side of the runner to the other, represented by that part of the drawing marked, D. This panel is made a little thicker directly under the hub than it is at each end of the runner. The panel and raves so connect the hub and shoe as to form nearly, if not-quite, a universal brace in every point liable to exposure or injury. The panel, crossing the runner alternately, places the edges, liable to be broken, at a much greater distance than the mere thickness of the panel, thereby greatly increasing the strength, with but a small increase of weight. The ends of the beam or axle are made round and pass through the hole in the runner, represented by that part of the drawing, marked, G, like the axle to a wagon.

That part of the drawing marked, F, represents the hole for the roller to the forward pair of runners, and that part of the drawing marked, E, represents the hole for the brace to the forward pair, and the roller to the hind pair of runners. To the roller in the forward pair of runners the tongue or pole is attached for the usual purpose of drawing or holding back the sleigh, though the sleigh is to be principally drawn by means of chains or rods attached to the beam or axle of the forward pair of runners, in the usual manner.

The two pairs of runners are connected together in the usual manner by means of a reach or other apparatus, and the body or load is placed upon the axles or beams in the ordinary manner.

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

The construction of the runners of a sleigh, of iron, or other metal in the manner above set forth, so as to cause the strain, arising from a pressure on one side of the runner, and a pulling on the other in a manner tending to break the same, to act mainly on the edge of a thin piece of iron or other metal, thereby avoiding an inconvenient weight, and preventing the center from operating as a fulcrum over which to break the sides of the runner, rave or panel.

ARAUNAH SPEAR.

Witnesses:
O. H. SMITH,
O. H. P. MILLER.