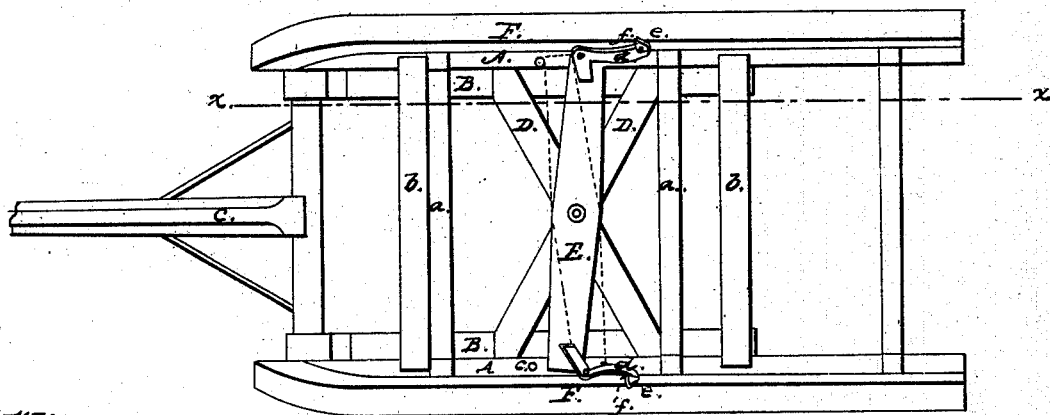
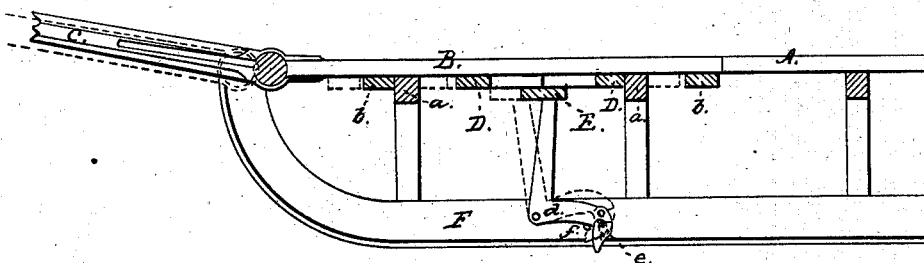


L. H. THOMAS.

Sled-Brake.

No 49,173.

Patented Aug 1, 1865.



Witnesses:

J. B. Woodm. H.  
J. T. Adams.

Inventor:

L. H. Thomas

# UNITED STATES PATENT OFFICE.

LEVI H. THOMAS, OF WATERBURY, VERMONT.

## IMPROVEMENT IN SLED-BRAKES.

Specification forming part of Letters Patent No. 49,173, dated August 1, 1865.

*To all whom it may concern:*

Be it known that I, LEVI H. THOMAS, of the town of Waterbury, in the county of Washington, State of Vermont, have invented certain new and useful Improvements in Sleigh or Sled Brakes; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows a longitudinal section through the sled. Fig. 2 shows an under-side view of the sled, with the sliding frame and vibrating bar.

The object of my improvement is to equalize the holding back between both of the runners and allow either of the prongs or hooks to let go and pass over obstructions or equalize their hold in the track.

My invention consists in the reciprocating self-adjusting bar attached to the sliding frame, in combination with the dogs or hooks to take hold of the ice or snow, so that when one of the runners is upon ice or a hard-beaten snow-path and the other is running upon a more yielding substance the reciprocating bar will allow the dogs to adjust themselves to the density of the substance they are brought in contact with, or either one of them throw up so as to pass over an obstruction, and at the same time put the burden to be borne upon its fellow.

To enable others skilled in the art to make and use my invention, I will describe it in detail, referring to the drawings, and to the letters marked thereon.

To any ordinarily-constructed sleigh or sled I place, between the rails A A, a square frame. The side pieces, B B, to which the pole or tongue C is attached, are of the same thickness as the rails, and are made to slide on the beams a a, and are held in by cross-bars b b, which extend under the inner edges of the rails, so as to allow the frame to slide a few inches back when the load presses forward onto the team, as in descending a hill. To the under side of the frame is secured, to the pieces B B, a cross-brace, D D, which lies in between the sled-beams a a. To the center of this cross-

brace is pivoted an evener or vibrating bar, E, which is held firmly against stop-pins c c when the draft is on the sled; but when the weight of the load forces the frame back the vibrating lever or bar E will have motion enough to relieve either one of the dogs or prongs d d, they being attached one at each end of the vibrating bar E, and pivoted to the runners F F so as to form right-angle levers, with movable hooks e e to thrust into the ice or snow as the weight of the load presses forward, so that either one or both of them will hold on in proportion to the density of the ice or snow that they come in contact with, or will entirely relieve itself, one at a time, to pass over an obstruction. The one being relieved necessarily forces the other down to its fullest capacity, which holds the load, but relieves the sled and team from the shock which would otherwise occur.

To prevent the movable hooks e e from sticking and holding in a position that would not allow them to catch hold, I put a pin, f f, in the runners F F just forward of the hooks.

The advantages of my improved sled-brakes over others are that the pressure of the brakes is equalized to the density of the surface they come in contact with, and when one of the brakes meets with an obstruction by relieving itself puts the whole work of both onto its fellow for the time being.

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

1. The vibrating self-adjusting bar attached to the sliding frame, the same being connected with the levers, and so operating the prongs or dogs that they will adjust themselves to the density of the substance they come in contact with.

2. Placing the pins f f in such a position with the movable hooks e e as to always insure their taking hold to break the force of the load when pressing forward.

L. H. THOMAS.

Witnesses:

J. B. WOODRUFF,  
J. S. ADAMS.