

J. LITTFIN.

BOB-SLED.

No. 190,880.

Patented May 15, 1877.

Fig. 1

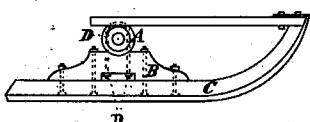


Fig. 2

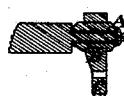
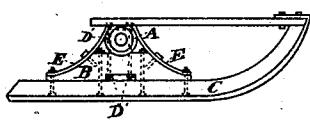


Fig. 3.



Witnesses

C. Palmer  
W. Konrad Jr.

Johann Littfin

Inventor

# UNITED STATES PATENT OFFICE

JOHAN LITTFIN, OF OSHKOSH, WISCONSIN.

## IMPROVEMENT IN BOB-SLEDS.

Specification forming part of Letters Patent No. **190,880**, dated May 15, 1877; application filed February 7, 1877.

*To all whom it may concern:*

Be it known that I, JOHAN LITTFIN, of the city of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain Improvements in Independent Bob-Sled Runners, of which the following is a specification:

The nature of my invention relates to the use of a saddle fastened to or made part of the runner of the sled, which saddle supports the hub of the axle, in combination with a brace-rod passing over the hub, to which it is secured by bolts, the ends of the rod being secured to the saddle.

Figure 1 is a side elevation of my runner. Fig. 2 is a section. Fig. 3 is an elevation, showing a modification.

A is the hub attached to the saddle B by a staple-bolt, D. C is the runner. E, Fig. 3, is a brace-rod, which I may use. It passes

over the hub, to which it is fastened by bolts D', and the ends of the rod are secured to the saddle.

The weight of the load, bearing on the axle, is transmitted through the saddle, so as to bear evenly on the whole length of the runner, and is an improvement on my invention as per Patent No. 151,785, dated June 9, 1874.

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

The hub A, saddle B, runner C, bolts D', and brace-rod E, combined substantially as shown and described, for the purpose specified.

JOHAN LITTFIN.

Witnesses:

C. PALMER,  
N. KONRAD, Jr.