

J. J. SANDGREN.
Bob-Sleds.

No. 164,770.

Patented June 22, 1875.

Fig. 1.

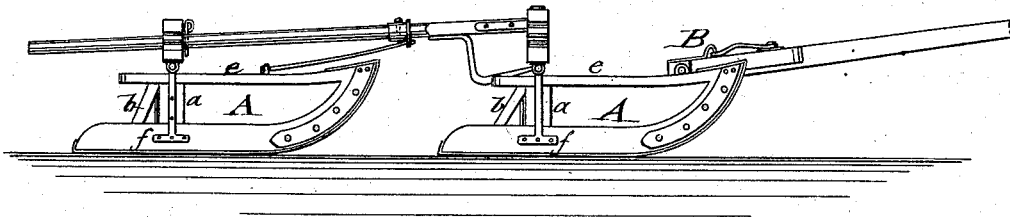


Fig. 2.

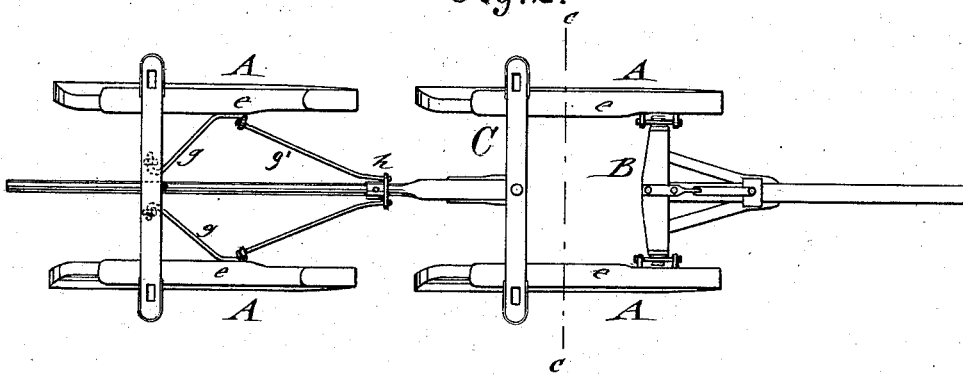
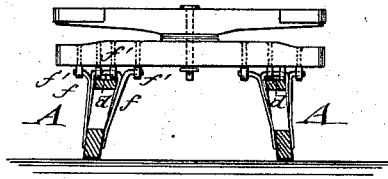


Fig. 3.



WITNESSES:

A. Benninghoff
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BY *mm*
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UNITED STATES PATENT OFFICE.

JOHN J. SANDGREN, OF IRONTON, WISCONSIN.

IMPROVEMENT IN BOB-SLEDS.

Specification forming part of Letters Patent No. **164,770**, dated June 23, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, JOHN J. SANDGREN, of Ironton, in the county of Sauk and State of Wisconsin, have invented a new and Improved Bob-Sled, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved bob-sled; Fig. 2, a top view; and Fig. 3, a vertical transverse section of the same on line *c c*, Fig. 2.

Similar letters of reference indicate corresponding parts.

My invention relates to improvements in bob-sleds with separately moving and adjustable runners, that adapt themselves to the unevenness of the ground, and combine the required degree of strength and durability with flexibility in the motion of the same. The invention consists of the connection of the runners with the lateral beams by suitable pivot joints, and the lateral brace-connection of the runners with the tongue and reach.

In the drawing, A represents the runners of my bob-sled, the front set of which is laterally connected by the tongue-bar B, pivoted to eyes applied by staples to the runners. Each runner A is made with a vertical top piece supporting-post, *a*, and rear brace *b*, and hung by a central clasp or band, *d*, extending over the top piece *e*, and by T side braces *f*

to eyebolts or staples *f'* of the lateral beam C. Each runner swings in this manner in longitudinal direction on the beam, and receives thereby the required degree of independent motion necessary for the ready adaptation and adjustment to the ground. The rear runners are hung in the same manner to their beam, and braced by diagonal brace-rods *g* and *g'*, of which one set extends from the top pieces of the runners back to eyes of the beam, while the other set extends forward to eyes of a sliding sleeve, *h*, of the reach.

The front and rear sleds may be adjusted to greater or less distance in the usual manner on the reach, forming by the independent and flexible motion of the runners a superior sled for the purposes for which the same is generally employed.

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

The combination, with front runners A and beam C, of post *a*, brace *b*, band *d*, piece *e*, side braces *f*, and eyebolts *f'*, as and for the purpose specified.

JOHN J. SANDGREN.

Witnesses:

B. G. PADDOCK,
B. W. BLACKMAN.