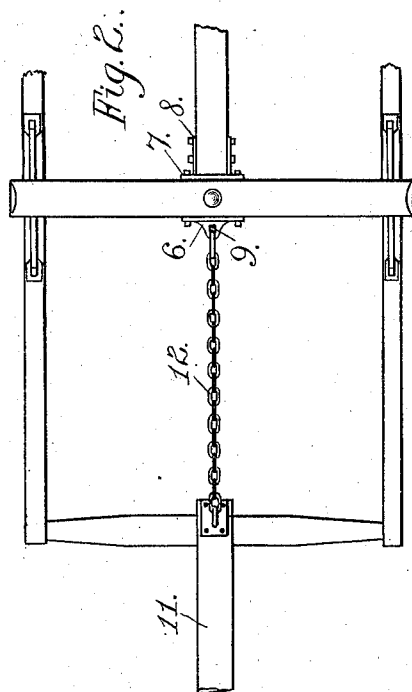
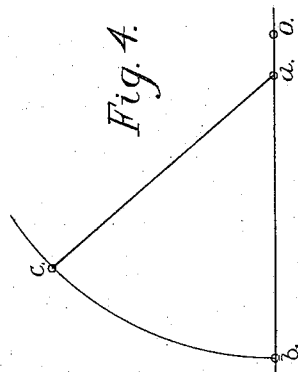
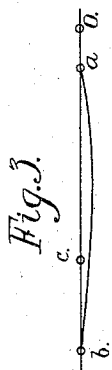
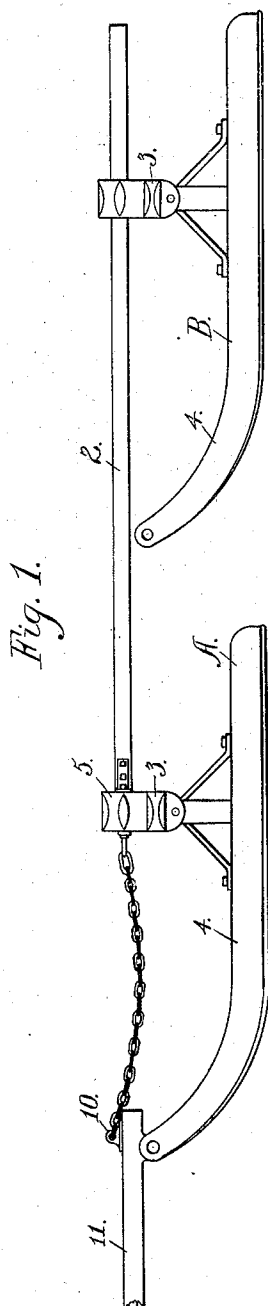


(No Model.)

M. D. PENDERGAST.
BOB SLED.

No. 558,836.

Patented Apr. 21, 1896.



Witnesses:

O. Biadbury.
W. C. Swift.

Inventor.

Maurice D. Pendergast
per: T. D. Munim
Attorney.

UNITED STATES PATENT OFFICE.

MAURICE D. PENDERGAST, OF HUTCHINSON, MINNESOTA.

BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 558,836, dated April 21, 1896.

Application filed January 10, 1894. Serial No. 496,391. (No model.)

To all whom it may concern:

Be it known that I, MAURICE D. PENDERGAST, of Hutchinson, McLeod county, Minnesota, have invented certain Improvements in Oscillating Bob-Sleds, of which the following is a specification.

My invention relates to improvements in oscillating bob-sleds, its object being to provide an attachment therefor which will prevent the tilting of the forward bolster when the forward bobs are turned at an angle with the reach; and it consists in the features of construction hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a pair of bob-sleds fitted with my improved attachment. Fig. 2 is a partial plan view of the same, and Figs. 3 and 4 are diagrammatic views illustrating the position of the check-chain in the cramping of the sled.

In the drawings, the forward bobs A are connected to the rear bobs B by means of the reach 2, which has swivel connection with the beam 3 of the rear bobs, so that any one of the runners is free to pass over an obstruction without straining the sled. The runners 4 are pivotally connected to the beams 3, as is common in the construction of oscillating sleds. On the front of the forward bolster 5 at its center is secured the casting 6, preferably held in place by the bolts 7, which pass through the angle-irons 8 and connect the reach to the bolster. This casting has an eye 9, which stands, preferably, from four to six inches forward of the bolster. This eye is connected with an eye 10 upon the top of the tongue 11 by means of the chain 12, the length of which is such that when the tongue is in line with the reach and supported by the neck-yoke of the team the chain will be slack, as indicated in Fig. 1, but when the forward bobs are turned or cramped at an angle with the others the chain is gradually tightened by the lengthening of the distance between the relatively fixed eye 9 and the eye upon the tongue. This is indicated diagrammatically in Fig. 4. The chain is thus tight-

ened and exerts tension upon the casting 6, as indicated diagrammatically in Fig. 3. The device thus prevents the tilting or tipping of the forward bolster when the forward bobs are turned at an angle, so as to throw off the load. This tilting of the bolster is a serious practical objection to the ordinary form of oscillating bob-sleds and is entirely removed by the use of my improved attachment. When the forward bobs are turned so that the ends of the beam offer no support to the ends of the bolster, any slight movement or overbalancing of the load will tend to tip the bolster in the opposite direction from that in which the bobs are cramped, and thus throw off the load. This movement is, however, checked by the chain 12, already under tension, and its point of attachment to the bolster being above its pivotal point the force necessary to be applied to the end of the tongue to counteract the first inclination of the bolster to tip is very slight, and the load is thus perfectly controlled in all ordinary positions.

I claim—

1. In an oscillating bob-sled, the combination with its tongue and forward bolster, of the rigid forwardly-projecting arm fixed to the center of said bolster near its top, the flexible inelastic connection between said arm and tongue of such length as to be slack when the tongue is in line with the reach but tight when it is at approximately a right angle therewith.

2. In a bob-sled, the combination with its tongue and forward bolster, of the chain and the rigid attaching devices for connecting it to the top of said tongue and to a point forwardly offset from the top and center of said bolster, whereby said chain hangs slack when the tongue aligns with the reach but is tightened so as to draw upon the bolster as the tongue is turned at an angle with the reach.

In testimony whereof I have hereunto set my hand this 14th day of December, 1893.

MAURICE D. PENDERGAST.

Witnesses:

SUSIE SUTHERLAND,
THOMAS SUTHERLAND.