No. 738,450. PATENTED SEPT. 8, 1903.

H. G. M. HOWARD.

HAND BOB SLED.

APPLICATION FILED DEC. 15, 1902.

NO MODEL.

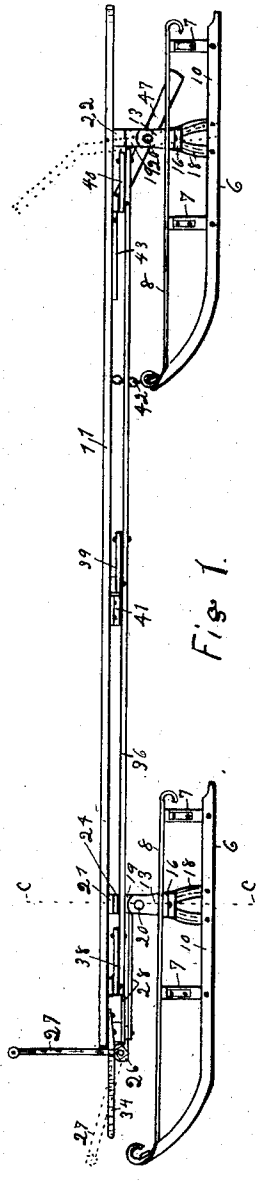


Fig. 1.

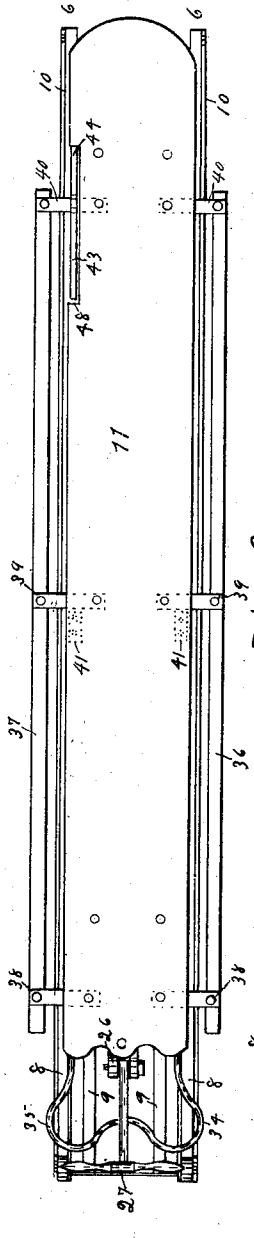


Fig. 2.

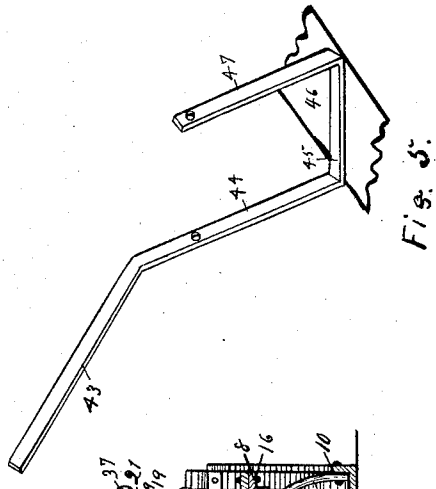


Fig. 5.

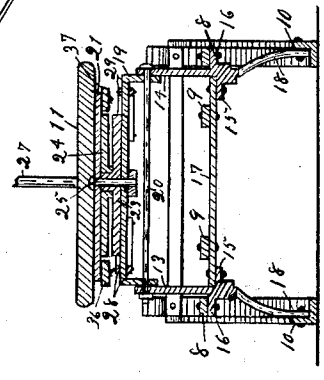


Fig. 4.

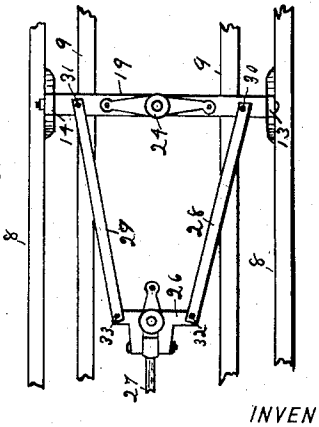


Fig. 3.

WITNESSES:

R. G. Weste

Thea C. West.

INVENTOR:

Henry G. M. Howard,

BY Lucius C. West.

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 738,450. Patented September 8, 1903.

UNITED STATES PATENT OFFICE.

HENRY G. M. HOWARD, OF KALAMAZOO, MICHIGAN.

HAND BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 738,450, dated September 8, 1903.

Application filed December 15, 1902. Serial No. 135,317. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. M. HOWARD, a citizen of the United States, and a resident of Kalamazoo, in the county of Kalamazoo, State of Michigan, have invented a new and useful Hand Bob-Sled, of which the following is a specification.

This invention relates to that class of sleds used by young people in their winter sports, commonly styled "hand bob-sleds," consisting in general of a sled under each end of a long top board upon which the users mount.

The invention has for its object the improved features below described and claimed, designed to strengthen and cheapen the production, to effect ease in riding, and more especially to support the top board and the burden on the same more directly upon the runners.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of the pair of bobs ready for use. Fig. 2 is a plan view of Fig. 1 with a change in the position of some parts; Fig. 3, a broken plan of the front bob enlarged and the top board removed; Fig. 4, a cross-section on line *c c* in Fig. 1 looking from a point at the right and enlarged, and Fig. 5 is an enlarged perspective view of the brake resting on a broken hillside surface as when in use.

Referring to the parts of the drawings pointed out by numerals, the runners 6 of the bobs are made from steel right-angled or approximately so in cross-section, as in Fig. 4. The usual sled knees and raves are shown at 7 and 8, respectively. I employ two other raves 9 9 within the outside raves 8 8 and a little removed from the same, Figs. 3 and 4, for better bracing the sleds against strain. I attach the knees 7 at the lower end to the inside of the upright flange 10 of the runners, Fig. 4.

To each of the two sleds of the bob I attach to the inside of the upright flange 10 of the runners 6 and between the knees of each sled a support for the top board 11 and its connections, and being thus attached to the runners and owing to its construction the entire burden practically of the construction, including the people riding, when the bob is in use, is supported directly upon the runners 6, thus making a construction perfectly safe and not likely to break, unduly spring, or become racked out of proper shape, nor any of the light parts become bent, as has been the case with bobs in which the burden is improperly supported. These supports consist of uprights 13 and 14 set opposite to each other and extended above the upper face of the raves 8 9, and the uprights are provided with brackets 15 and 16, preferably integral, one on each side, Figs. 1 and 4, to support the raves 8 and 9 at this point. The outer brackets 16 are a little the highest, by which means I am permitted to use a cross-bar 17, Fig. 4, extending from one inside bracket of one support to the inside bracket of the other or opposite support and attached to said brackets and to place the inside raves 9 on said cross-bar 17, to which they are attached, and thus have the raves 8 and 9 level with each other or the same height. The base of these supports is forked at 18, imparting a forward and back bracing effect. It will be seen that these supports really perform the function of knees as well, but are not used for this designed purpose, but, as stated, to secure the proper foundation-support for the burden the sleds are required to sustain. Pivoted to the upper ends of the two opposite supporting-uprights 13 and 14 is an arch representing an unduly-widened inverted letter **U** 19. These arches 19 support indirectly the portion of the construction above them, and they being pivoted by the rods 20 permit the sleds to tilt up and down on said pivot when the ground over which the bobs are running is of a nature or surface to cause them so to do. Over the bobs on the under side of the top board 11 are cleats 21 at the front end and 22 at the rear, the latter being a little the thickest, as is also the rear arch 19 a little the highest, thus to compensate for the thickness of the forward swiveled couplings below described, and thus keep the top board 11 approximately the same height at each end.

The cleat 22 and the rear arch 19 are attached to each other directly, while at the forward end the male and female swiveled blocks 23 and 24, respectively, are introduced between the cleat 21 and the forward arch 19, and a pivotal and retaining bolt 25 is passed through said blocks. By this means, which is simple but very strong, the forward bob is

permitted to be swung or tilted laterally in the act of guiding the bobs, as is of course well understood, and we have thus made our bobs for hand use possess the capability of the same motions or movements which large lumber-bobs drawn by horses should have.

To the under side of the forward end of the top board 11 I have pivoted an ear 26, to which a handle 27 is pivoted at the lower end in a manner that said handle can be held up straight for operation or be allowed to swing forward and be laid down out of the way when not needed. The handle 27 is shown up in Figs. 1 and 4 and laid down in Fig. 2, and thus in dotted position in Fig. 1.

Strips 28 and 29 are pivoted at the ends to the forward arch 19 at 30 and 31, and these strips are pivoted at 32 and 33 to the lateral ends of the ear 26. (Shown in Figs. 1 and 4 and more plainly in Fig. 3.) By this means when the operator desires to guide the bobs he twists on the handle 27 and cants the forward sled in either lateral direction desired, since the ear 26 is pivoted to the top board and the male block 23 is attached to the forward arch 19, and the female block 24 is attached really to the top board. This makes the forward sled also pivoted to the top board.

Attached to the forward end of the top board 11 are two stirrups 34 and 35, both made from one piece of rod and are for the steerer to rest his feet in. I have provided the sides of the top boards with foot-rests consisting of strips 36 and 37, one on each side, which strips are pivotally attached to the under side of the top board by cleats 38, 39, and 40 in a manner that the strips are under the top board, as in Figs. 1 and 4, when not in use, or pulled out, as in Fig. 2, when in use. A stop 41 is made out of a short piece of angle-steel and placed on the under side of the top board in position for the middle cleats 39 to swing against when the strips of the foot-rests are swung out, as in Fig. 2. Thus any forward purchase or pressure on the foot-rests is prevented from getting them out of place or carrying them nearer the edges of said top board. The stop 41 is shown in Fig. 1 and dotted in in Fig. 2.

It will be observed that the rear sled is retained in its normal position in relation to the top board 11 by a chain 42, attached to its forward end and to said top board, Fig. 1, thus preventing said forward end from tilting too far down on the pivot of said sled. In Fig. 5 is shown a brake made from a bar of metal and representing three sides of a square and one side extended into an obliquely-tilted handle 43. The two sides 44 and 47 are pivotally placed or hung on the rear rod 20 between the two runners in such position that when the handle 43 is raised, as in dotted position in Fig. 1, the bottom bar 45 scrapes on the ground or hillside 46, as in Fig. 5, and thus slows down or stops the bobs. The path for riding on can thus be scraped clear from surplus snow or obstruction if desired. The angle of the handle is bent to that degree that when the brake is not in use its lower bar then hitting against the under surface of the raves 9 the handle lays in a cut-away portion of the top board at 48 and level with said top board out of the way when not desired for use. The design is that the portion of the brake forward of its pivot shall be heavier than that portion in the rear of its pivot, by which means it holds itself in its out-of-use position, Figs. 1 and 2.

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

1. In combination with the top board of hand-bobs, the side foot-rests consisting of a strip each side, cleats pivoting said strips to the under side of the top board, and stops on the under side of said board in position to be contacted by one of the cleats when the strips are swung out for use, substantially as set forth.

2. The combination of the front and rear sled, the opposite uprights attached to the runners of said sleds and extending above the top of the sleds, the abnormally-wide inverted-U arches pivoted to said uprights, whereby the sleds tilt vertically, the top board provided with the under cleats and rigidly attached to the arch of the rear sled, and pivotally attached to the arch of the front sled, whereby the said sled may be swung laterally, substantially as set forth.

In testimony of the foregoing I have hereunto set my hand in the presence of two witnesses.

HENRY G. M. HOWARD.

Witnesses:
GEORGE E. BARDEN,
PARKE L. BURDICK.