

MAKING A SLEDGE

By Oliver Cameron
with Ole Wik



Ole Wik and Tinnik haul a small sledge to spring camp, Kobuk River, 1975. Image: Sasha Wik



The same sled outfitted with handlebars to haul frozen fish caught under the ice, Ambler, 1975. Image: Sasha Wik

You can make a sledge with solid wood runners for heavy work, using ordinary lumber. In my case, I made the boards out of logs, using a rip saw.

The runner is vertical on the outside, plumb. On the inside it tapers from the running surface up to the crosspieces, so that the top of the runner is wider. If the runner is 6" deep for instance, then it might be 2-1/2" wide at the top, or even wider.

If the bottom of the runner is to get a metal shoe, it will be slightly less than 2" at the bottom, maybe 1-3/4". That way the metal will extend a little past the wood, and the wood itself will not be dragging against the snow and causing friction.

The simplest way to make those sledges is to nail 1x6" boards across from one runner to the other, spaced a bit apart. Then, using large nails, you fasten a long piece of wood through the ends of those boards right on top of the runners on each side.

With use, that top strip is going to work loose a little bit. On an uneven trail with a load, your sled is going to flex a little bit after it's worn in, but the flex is limited. By having the tops of the runners wide and the ends of the crosspieces well nailed down, the sled will still hold together and be useful for quite a while.

At the front of the sled, you cut the board off to make the upturn. You can take the wedge-shaped piece that you cut off and nail it on top of the runner to extend the upturn. The front of your shoe that then comes up a little higher, and has more support.



Keith Jones prepares to take a load of gear across the river to spring camp, Kobuk River, 1973. Note the upturn of the runners, and also the gee pole used to turn the sledge. Image: Sasha Wik.

If the angle at the front of the runners is quite steep, your sled is going to be hard to turn. So after you've cut that piece off the front, you plane off that corner where the runner hits the snow, so that the runner tapers gradually back for maybe a foot. On most ordinary little rises, the runner then has a gradual climb to lift the sled up. It also gives your tow line a better purchase on the front of the sled when you're making a turn.

You cut the back end of the runner board down about halfway to form an extension to stand on. If it is a heavy sled, you don't need a really long extension out back to hold your weight up. On the other hand, if the sled is short and stubby, the sled will be bouncing up and down in front, making steering difficult. You can get around that by having a longer piece of runner under you.

That gives your dogs a big advantage in pulling the sledge, although it also makes the sledge a little more difficult to steer.



Oliver and his daughter Dorene as they prepare to leave Ole and Sasha Wik's place after a visit. Note that Oliver is standing on the flat place at the end of the runners.

Image: Sasha Wik

To lash the load in place, I have a fixed tie-down rope on each outside edge of the bunk. Ordinarily when I'm lashing a sled, I'll cover the load with a canvas or something. I'll have the middle of my tie-down rope tied to one side rope, about in the middle of the load, usually with a clove hitch or something. I tie one end across the load back and forth at the back of the sled, the other at the front.

I take a bight in the tie-down rope, push it through the opposite tie-down, and then pull it back partway over the load to form a loop. I run the end loose end under the tie-down rope on the starting side, and then run it back up through that loop. When I draw it up, I have quite a bit of mechanical advantage, and can get it quite tight.

When I end up, after crisscrossing back and forth, I pull the working end up snug and fasten it to one of the crisscrosses that are running more or less diagonally across the load

To tie the rope off, I go over that crisscross, bring the end under, go over the adjacent crisscross and back under, and tie a slippery double half hitch there. The end of the rope approaches the crisscross at right angles, and when I pull that up, I naturally have quite an advantage in tightening that area of the load. It holds quite well, and when I go to unload, a tug on the end of the rope frees the knot. It's quite convenient.

The principle that I am using there is that if you have a line stretched and snugged up between two points and then you pull sideways in the center of the line, you'll have a tremendous advantage in pulling the two original points together.

Of course more slack there was on the crisscross rope and the farther you pull it, the less advantage you have. But if you can pull that standing line a little ways and take up the slack, or hold the thing you're trying to pull with another line, you can take up the slack in your first line. That system gives you a tremendous mechanical advantage, and you don't have to fool around with a box and so forth.

I usually put my foot on the load and wiggle it as I draw up the rope. After jarring along for some distance under way, I stop and tighten.

I've never used a sled behind a snow-go. When you see pictures of North Slope people, the sled is a long way back, on a long rope. The hitches that I have seen have a tapered, triangular plywood base on top of the tongue, with a hitch at the peak. The hitch has to be long enough so that the side of the tongue doesn't hit the tracks when you make a sharp turn.



Alaskan sled hitch. Image: Sasha Wik

Some people have used ordinary ball hitches for the connection to the machine. That works well. You can also put an iron strap on top of the yoke or the frame and another on the bottom, and have a pin that goes down through the upper and lower holes, with the swivel plate on the back of the snow-go between them.

There are various ways of providing a flexible tongue. If you're using a piece of pipe or tubing, then you can use another larger piece over it or inside it that hook to a very sturdy spring that is limited in how much it can stretch. The advantage is that when you're stopped and the runners are sticking, this gives you chance to give a jolt that will break the sled loose better.^{1,2}

1) This essay stems from a series of telephone conversations that Ole Wik had with Oliver between December 2007 and February 2008. Highlighted text indicates remarks made by Ole.

2) Oliver is describing the type of hitch shown in the image below. The tongue on the back of the snow machine and the vertical pin allow for up-and-down motion and for turns, respectively. The rod can rotate freely within the tube at the front of the yoke, so the sled can rock from side to side. The springs on the ends of the rod allow for back-and-forth motion under way and for giving the sled a bump to break the runners free of the snow when you're first starting off.



Image: http://www.iceshanty.com/ice_fishing/index.php?topic=207220.0