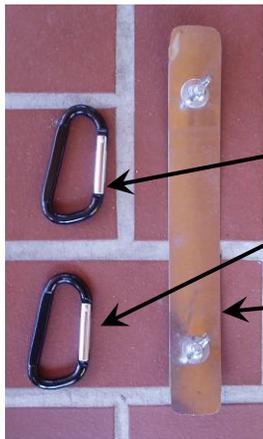


## A Bombproof Improvised Toboggan

Myron Allen  
Medicine Bow Nordic Ski Patrol

### Materials

1. Patient's skis
2. 2 key ring carabiners
3. 10" x 1.5" piece of springy sheet metal for the brace
4. 2 bolts, 2 wing nuts, 4 washers to attach the brace to the shovel
5. Metal shovel (you don't need the handle in building the toboggan)
6. 16" x 48" plastic sheet (cheap kid's sled), trimmed as shown below
7. 30 meters of 7 mm cord



2 key ring carabiners

10" x 1.5" sheet metal brace (it needs to be flexible)  
Drill holes about 7" apart.  
Stick a bolt, 2 washers, and a wing nut in each hole.



Metal shovel (I wouldn't trust plastic for this purpose.)  
Drill 4 holes as shown.  
The shovel may already have holes 1 and 2.  
Holes 3 and 4 must match those in the sheet metal brace.

16" x 48" plastic sheet, trimmed as shown below  
Cut 2 slots (shown below) wide enough for ski tails



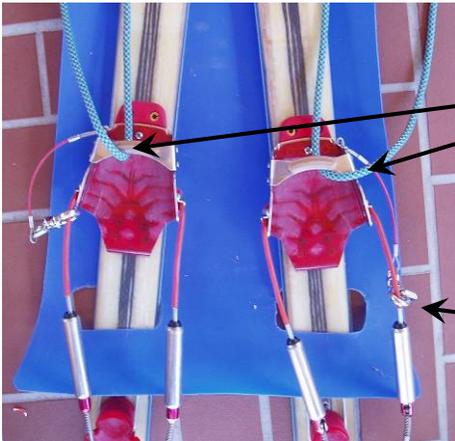
30 meters of 7 mm cord

## Assembling the toboggan



1. Slip the ski tails through the slots in the plastic sheet. (The sheet should end up below the tips and above the tails, for maneuverability.)
2. Clamp the plastic sheet and ski tips between the shovel and the brace.

3. Run the cord ends through the ski bindings and back up toward the shovel.
4. Clip the ends of the cord to the shovel using carabiners and figure-8s on bights. (Dress and leave at least a 3" tail on any knot that you're counting on for safety.)

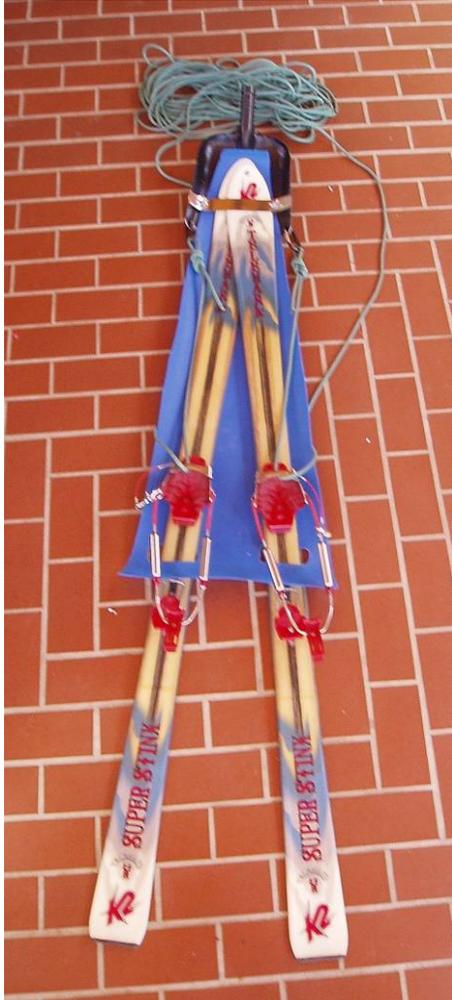


5. Run the cord through the bindings and back up toward the bow. (This way the stresses applied when you haul the loaded toboggan forward will tend to pull it together, not apart.)

6. Better clip safety cords out of the way so they don't catch on trees and snags.

## The assembled toboggan

The whole thing goes together in about 3 minutes, even with cold hands. Even better, it doesn't come apart until you take it apart.



Hauling the toboggan forward (on the flats or uphill) and belaying it (downhill) both tend to pull the bow assembly and ski tips together.

Placing the plastic sheet beneath the skis, as shown, makes the toboggan remarkably easy to maneuver.

Throw the brace assembly (plate, bolts, nuts, washers) in the bottom of your pack and leave it there for the season.

In a pinch, you can get by without the plastic sheet — at the expense of patient comfort — by lashing a ski pole to the bindings as a spacer.

30 meters is more cord than you need for a toboggan, but it's a nice length for single-person emergency rappels and avalanche-testing belays. (For these purposes you'll also need a harness, which you can improvise using 6 meters of 1" webbing and a locking carabiner.

Extra credit:

1. Add a tail rope for serious downhill loads.
2. Add padding for your poor patient's butt.
3. Use your emergency shelter material to protect the patient from hypothermia.