Trail Construction: Levers and Leverage

Trail building in this region of the United States consists of moving a lot of rocks, many of them too heavy to carry. This is when levers and leverage come into play. The trail builder's lever of choice is a rock bar — a 5-foot-long,

18-pound metal tool that can offer a 60:1 advantage. That means a person who can exert 5 pounds of force can exert 300 pounds of force using a rock bar. Advantage, or leverage, is how the trail builder gets the job done.

THE CARRY



When a rock is too heavy for one person to pick up on their own, a team of people can combine their strength using rock nets.

THE ROLL



If a rock is too heavy to pick up, the next method is to try rolling it.

THE DRAG



Slings help trail builders use their body weight as leverage against the rock they're dragging. This method can be useful in areas with tricky footing.

THE FLIP



Trail builders can use their rock bars in unison to flip a rock to the desired location.

THE PICK AND PUSH



The pick and push is a technique used to move a rock without rolling it. The front is "picked up" while rock bars "push" on the back.

THE ASSIST



Sometimes trail builders need to call in reinforcements with greater leverage than the rock bar. Griphoists, a type of winch, and block and tackle are used along with rock bars to gently guide rocks into place.