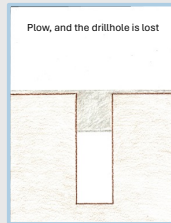
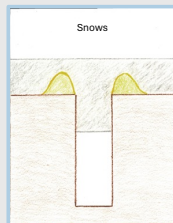
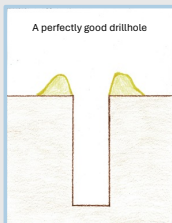


Plowmate: The Drillhole Saver

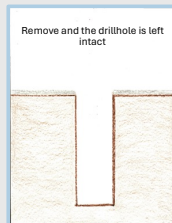
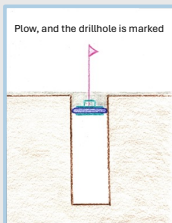
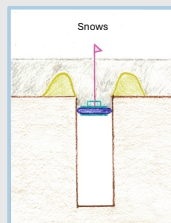
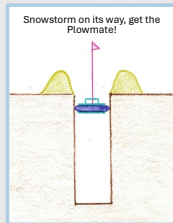
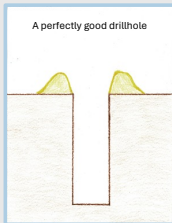
The Problem

True story: A blast pattern with over 400 drillholes was nearly complete. That night, a snowstorm blew in. The next day, the blast pattern was covered in 3 feet of snow. Oh no! What do we do?

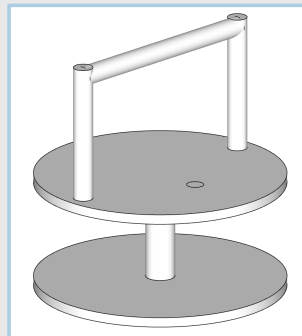
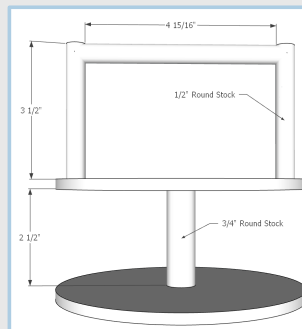
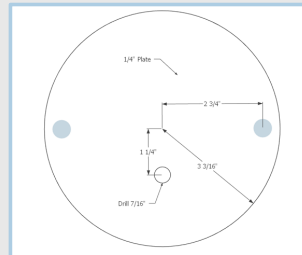
Option	Operation	Time	Cost
#1	Plow the snow and redrill	7 hours	\$ 27,421.33
#2	Blast crew to locate each hole and dig them out by hand	20 hours	\$ 14,544.00



The Solution

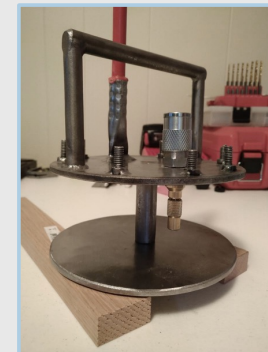


The Design

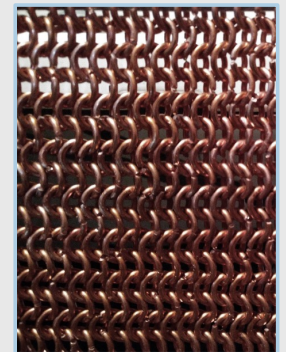


The Build

Prototype



Chainmail



The Test

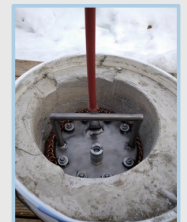
Drillhole



Insert



Presto!



- **Conclusion:** Plowmate holds pressure and grips the sidewalls of the drillhole very well.
- **Improvements:** Using a 3-D printed hard-polymer body instead of steel.
- **Next Step:** Put into a real drillhole and plow over it.