

Alcohol Stove

The pictures should be pretty self-explanatory I hope.

I have used both a marble and a bolt head cut from a carriage bolt to plug the fill hole in the top of the stove. The marble tends to break, even shatter, from the heat; the bolt head works much better.

Crimping the edge of one of the cut cans makes them slip together easier. You can use epoxy or silicone caulk to glue the cut cans together; silicone is more heat resistant.

Rubbing alcohol 91% works pretty well as a fuel, better than 70% rubbing alcohol, though both will burn ok. The 70% has loads of water (30%) in it, so it is harder to prime and burns much cooler than the 91%, but both leave soot behind. Alcohol fuel (denatured alcohol; I bought a can at Home Depot) works best, burns hottest, primes fastest, and leaves no soot.

I tried both alcohol fuel and 91% isopropyl rubbing alcohol; both will boil a quart of water in about 5 minutes.

I made the pot support from a couple of strips of steel, cut and notched to fit together and set on the stove support. The stove needs some space above to allow air circulation to feed the fire. Putting a lid on the larger can (it's a Costco size canned chicken or beef can) snuffs the fire out quickly.

Fill the stove with fuel until there is a little puddle in the center well; place the plug over the hole and light the puddle. In a couple of minutes the fuel will start to vaporize inside the stove and the outer ring of pinholes will produce a nice hot flame. The fuel will last for about 40 minutes before it runs out.

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