Alcohol Burner/Stove

YouTube Video: https://youtu.be/Z9VVYXFnHOM

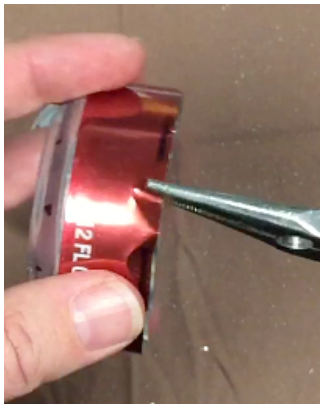
4 simple Steps

1. Mark your cans
2. Cut your cans
3. Join your cans together
4. Make the burner holes

1. Mark both cans about an inch from the bottom. You can use a book, board or other object about an inch thick and a marker to mark a line for cutting your cans at. Download and print the burner template to mark the bottom of one can with how many burner holes you want for your particular can size and build (see step 4 for details and/or marking at this later step).

2. Cut off the top 1/3 of each can and then cut down at an angle toward the bottom line and cut along the line for each bottom part of the cans. For the simmer lid take the leftover 1/3 can top and cut along where the angle starts to curve down to the side wall of the can.

3. To join the two cans together I have found that taking some needle-nose pliers, and with the can that will have your burner holes, bend in a little piece of the can wall all around where the can will be fitting inside of the bottom can that will be your burner base. Then place the base on a flat surface and take your time to fit your top piece inside the bottom piece. Once you have it inside a little around the entire can wall, tap around the top to slowly push it into the base. Once it is seated further in, you may even use a small hammer or mallet to tap around the top to settle the two cans together snug. You should end up with a pretty decent seal around the cans once they are seated properly. Try to avoid any large gaps or creases between the can walls, so you don't end up with flames shooting out those odd spaces.






4. Making the burner holes is a big key to the functionality of your alcohol stove. The size of cans you chose to use, and the size of the burner holes can change how much alcohol is needed, how large the flames are, and how effective the burner is at boiling and/or cooking. I have found that for most of the standard 12oz soda cans, making 10-12

holes around the diameter of the can, and two holes in the middle for the fuel to drain in, seems to work well. If you have a smaller or larger diameter can then you may need to adjust the number of holes accordingly. Using the template downloads from the website can help with spacing and marking them out as needed.

The holes can be made with a thumb tack, which keeps the holes smaller, allowing the gas pressure and flames to stay more consistent while using the burner. A drill or Dremel tool can also be used to make the holes, but it needs to be a very small sized drill bit to again keep the holes smaller for proper pressure and flames.

Once you have the burner built, test it out using a high content alcohol of your choice. I have primarily used Methyl Alcohol (yellow bottle of HEET fuel additive), I have also used 70% or higher grade rubbing alcohol. I have found that with the proper fuel and burner flame you should be able to boil 2 cups of water in approximately 8 - 10 minutes with 1 ounce of alcohol in your burner. Now this may vary based on your environment (temperature, wind, altitude, etc.) so experiment where needed, and plan accordingly depending our your intended use.

Just like a stove top burner, you will need some type of pot stand to give your burner space to function. Here are a couple of possible options.

A wind shield can also help to block weather, and also capture the heat for more effective heating. One possible option for making a windshield is using the bottom of an aluminum roasting pan. This is a nice lightweight and foldable option for backpacking applications.

A #10 Can could be both a pot holder and a wind shield.

1. Cut both the top and bottom off of the can, add some holes around the bottom for air flow.
2. Drill four holes half way up the side walls, two on each side a couple of inches apart.
3. Take a metal wire clothes hanger and cut two pieces off to put through the holes for a pot stand.

Depending on how deep your pot is you may need to cut a section out at the top of the can to allow your handle to stick out the side. Remember that you will still need some type of starter plate underneath the can to put alcohol around the outside for starting the burner. This could just be a simple soup can or other can lid underneath.