

Making the Penny Alcohol Stove

@2003,4,5 mark jurey

Penny Stove

The following building instructions are brief. If you want more detailed info. please read the FAQs section below. Good luck and have fun.



Materials you need:

Two 12 oz. Heineken cans and one pop can. Two drip irrigation stakes- or wire hanger, bike spokes etc.. One ft. of bailing wire- or solid copper wire etc.. One drier vent tube- or heavy foil etc..

Tools you need:

Although a good scout could make one with his knife, the following tools will do a cleaner job: large scissors, hand drill, 1/4" & 1/16" drill bits, needle nose pliers. At least one friend to drink the extra beer.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



The Heineken can has raised bands that provide perfect diameter and spacing for all of the parts. Three cans are needed to make the stove. Another kind of pop or beer can actually works better for the top/base. Cut with a knife and finish with large scissors.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



Top/base should be shorter than shown (about 1/2" tall). The Burner (3/4" tall) is cut off just below the first band. The Fuel Cup is cut off at the top of the band (making it about 1 1/4" tall). The Simmer ring uses a top band and top flat section (about 1" tall).



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



The burner has a 1/4" hole drilled in the center and six 1/16" holes spaced outside the ring drilled vertically from outside the can (see lines). Needle nose pliers were used to make 12 dimples or folds. These must end 1/4" short of the top edge. A hole punch was used to make holes in the folds to release hot gases to the inside of burner. 12 are shown, but 6 (every other fold) are enough.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



The burner is carefully tapped into the fuel cup until it hits bottom and provides a tight seal. A clean press fit between the burner and the cup is important because it keeps primer fuel from draining and heated gasses from leaking while burning.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



The top/base is used as an insulated support for the fuel cup. This helps keep a stable temperature in the stove and provides protection under the stove. This picture was taken just as priming fuel was burned up and the stove was starting to light.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

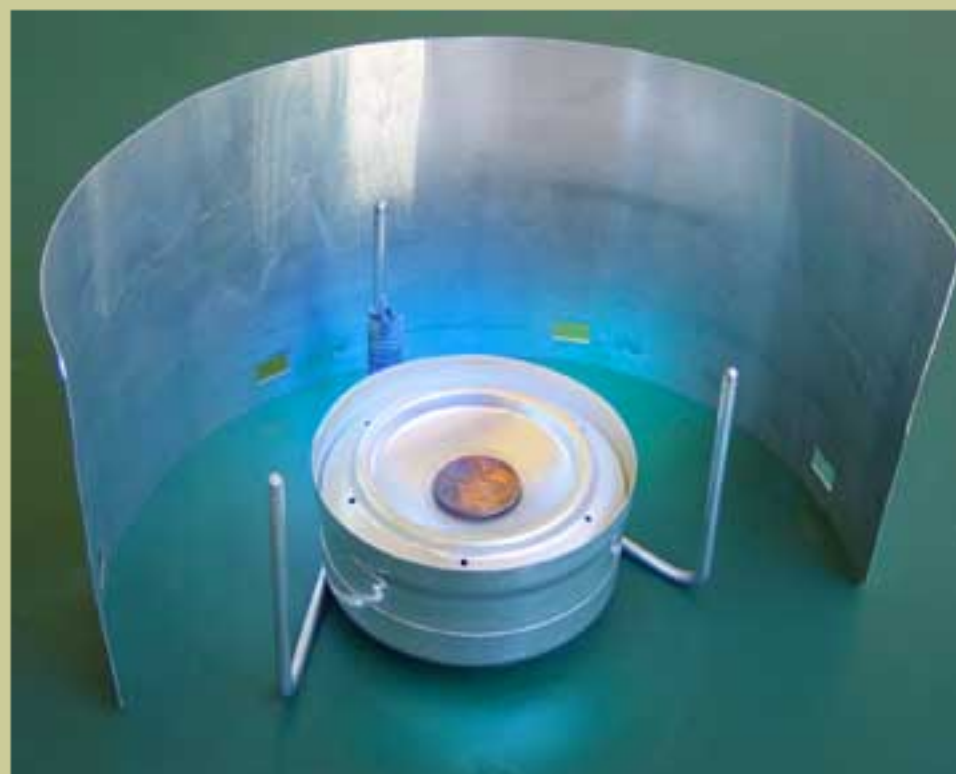
Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



Two "U" shaped wires wrapped together with thin wire form the pot support. Drip irrigation stakes work best. Three legs make a stable base- supporting the pot at least 1" above the burner. My windscreen is a section of aluminum Dryer vent. Tests show that screen is not necessary in good weather and only increases one quart boil times by 30 seconds.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



Modified 2 quart Open Country pot (6oz.) is large enough to melt snow, sterilize water, wash clothes, or shampoo hair. The stove, support, and screen fit inside the pot (total 8.3oz). An 8oz. bottle of alcohol (about 12 meals) fits inside along with a spork, cup, scrub pad, soap, matches, lighter, salt, pepper, coffee, tea, and towel. Total cook kit is less than 20oz.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

©2003,4,5 mark jurey



The top/base can be used as a cover for storage or to seal the stove and save fuel between meals. I now use the bottom of a pop can with one 1/16" hole in the bottom- it's lighter and fits tight without getting stuck. Simmer ring slips over the bottom (not shown in this photo). The package is small enough to store inside of a plastic camp cup.



[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

@2003,4,5 mark jurey

How to use the stove

1.

To boil 2 cups:

Fill the entire burner to the top of the cup with denatured or grain alcohol. This will be about .70 oz. of fuel. For a faster light, use a knife or stick to slide the penny aside and drain the fuel from burner center into the cup. Side the penny back over to cover the hole.

To boil one quart:

Do step one, then fill the burner center again covering the penny. This will be about about 1.2 oz. of Fuel.

For maximum burn time:

Slide the penny aside and fill the cup. Slide the penny over the hole and fill the burner top. this will be about about 2 oz. of denatured alcohol.

* Tests have shown that 5 ml of fuel in the cup will provide the fastest priming time. As stove warms, any fuel covering the penny will run into the cup and begin to boil.

2.

Set the stove under the pot support, add windscreen and pot. Light the burner - you may not see the flame so be careful.

3.

After the pot has boiled, drop the simmer ring over the burner (small side down). It will insulate the cup and slow the burn but hold the boil for a very long time. If you'r cooking rice or dehidrated foods, put the simmer ring on as soon as the stove is completel hot.

[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

@2003,4,5 mark jurey

Why the Penny and Simmer Ring?

The Penny

The penny acts both as a self filler and pressure regulator - maintaining a constant stove pressure and flame height. Alcohol stoves work by boiling fuel and burning the gases released. If this stove burns too hot, gases blow under the penny and provide a central burner until pressure is released. Then, all gases are again released through the outside burner holes - heating the fuel cup keeping the fuel boiling. This feedback helps the stove maintain a consistent efficient flame. The stove is also self priming. Priming fuel covering the penny is released into the stove once the penny starts to heat. No fuel plug to open and close or threads to strip.

Hight tech stoves have a screw to seal the hole. This builds high pressure and drives gases through tiny burner holes. This can be dangerous and requires that the stove be glued together with high heat epoxy. Since they are dependent on pressure and tiny holes, these stoves are also more susceptible to changes in altitude, temperature, and wind. They require fine tuning of the burner holes and distance from burner to pot.

The Simmer Ring

Since a fast boil was the priority, this stove was designed put out as much heat as possible. After water has boiled however, maintaining the boil requires much less heat and a different kind of stove. The Simmer Ring changes the stove design in two ways. First it insulates the fuel cup from the flame. This cools the fuel, releasing less gas and slowing the burn. Second, it effectively raises the hight of the burner, maintaining the optimum distance from the smaller flame to the bottom of the pot. With 2 oz. of fuel this stove wil simmer for about 40 minutes including lighting time.

[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

Making the Penny Alcohol Stove

@2003,4,5 mark jurey

Why use Alcohol?

For over 40 years I loved my white gas stove. My original Primus lasted for most of that time, but I never liked carrying or using gas. I have had only a few close calls, but always worried about all that gas under all that pressure miles from the nearest road. Then, one winter ski trip, I woke up in a pool of water in an ice covered tent and found that my new gas stove would not work. After taking it apart several times with frozen and bleeding hands, I decided that I needed a more dependable heat source.

I usually carry some alcohol (for medicinal purposes only) and thought how nice it would be to have one supply to satisfy all of my needs. Need quick heat, drink it - need dinner, pour it in the stove. After researching alcohol alternatives on the Web, I was hooked.

Besides the obvious advantage of a universal fuel, there are many more reasons to use an alcohol stove. It has no moving parts, nothing to break, and it always works. It is cleaner and produces no soot when warming up. It is lighter and smaller than any other alternative (less than an ounce). It is quiet, you can cook and listen to the birds. It has almost no smell.

Alcohol produces no explosive fumes (boats have always used alcohol stoves for this reason). If it leaks in your pack or tent, it leaves no trace. You can use it to sterilize a cut, rub on your sore muscles, light a wood fire safely, and, make a snow margarita. If I loose it, I can make a rough replacement with a few cans and a pocket knife. Why not alcohol?

Mark Jurey

[Print Instructions](#) | [Penny Stove Features](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

*I share this stove to help help keep canisters out of landfills.
If you want to thank me, please send a check to a wilderness preservation fund such as:
Sierra Club, P.O. Box 52968, Bolder, CO 80322-2968*

Links

[Ask me a question](#)

Or share your experiences

[Zen Alcohol Stoves](#)

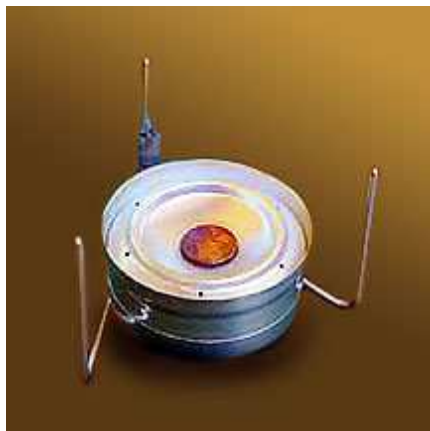
Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)

Lots of information - great food & gear

[Print Instructions](#) | [Original Instructions](#) | [Alcohol Stove Myths](#) | [Penny Wood Stove](#) | [Favorite Recipes](#)

Penny Alcohol Backpacking Stove



"This plan is human ingenuity at its very finest. For the cost of a few beers (plus one penny), you can build yourself a camping stove like no other... lots of scientific data to back up the claim that it's the best travel stove for any money..."
Jules Allen, St. Petersburg Times

By Mark Jurey

For years I have been developing a homemade ultralight backpacking stove that heats faster, burns longer, uses less fuel, and is easier to use and build. Most alcohol stoves will heat two cups of water, but when I camp, I may want to sterilize four cups fast or slow cook a pot of brown rice, pasta, or grains on 2/3 oz of fuel.

A pressure regulator and simmer ring combination let it function as two stoves. It can prime and boil a quart of water just 20 seconds slower than a gas cook-top, or, simmer at max efficiently for up to 40 min. Web reviews from around the World show that it "performed like a champ" with a wind chill of -9° and "great" at the top of Mt. Whitney - 14,491 ft..

Independent tests document that it heats faster, uses less fuel, and simmers longer than any tested. It combines the advantages of the three basic designs - the efficiency of a High Pressure/Photon, the ease to fill and light of a Double wall/Pepsi, and the simplicity of a Tub/Cat stove. So simple that you can build a rough one on the trail with a pocket full service knife - no insulation, rulers, epoxy, needles, or tape. If you have played with homebuilt ultralight stoves before, this one should be a snap.



Buy this Penny Stove

Have Bill Waite make you his beautiful version of the stove.
\$30 shipped to you - 15% supports wilderness preservation.
Take this link or contact [<sales@acaircraft.com>](mailto:sales@acaircraft.com)

Making the Penny Stove

Building instructions and frequently asked questions.

Penny Wood Backpacking Stove

This 3oz. stove works as a pot support for the Penny.



almost full burn simmer ring burn

Penny Features

Ultralight

Total stove & support = 43 gm or 1.5 oz

Burner w/ simmer ring and lid/base (19gm), large pot support (24gm)

Hot and efficient

Independent tests show that it heats faster AND uses less fuel than the most popular commercial stoves and homebuilt stoves - many use 50% more fuel.

Fuel Use

Under controlled 68° conditions, 20 ml. (2/3 oz.) of fuel boils 2 cups of 64° water in 4 min. and simmers for 2 min. or 10 min. more with simmer ring. At that rate, 8 oz. of fuel will boil 24 cups (6 quarts) of water and simmer for up to 2 hours.

Wind & humidity could increase fuel use, but a wind screen could decrease it.

Less wind vulnerable

The low profile and large low-pressure jets heat faster, are resistant to the wind, never clog, and are almost impossible to blow out.

Automatic pressure adjustment

Tests show that the penny regulator provides a stable efficient burn under changing conditions. It seals the filler hole to hold pressure for slow simmer and provides a center flame for maximum burn without overheating.

Self measured fill

To boil two cups, just fill the stove to the top covering the penny (2/3 oz.) and light. For a one quart boil, fill to the top, slide the penny aside to drain fuel and back to cover the hole, then fill the top again. No eye droppers, cups, or measuring bottles required.

Self priming / filling

As stove heats, excess priming fuel on the top of the burner runs under the penny to fill the stove - no primer ring, cold weather lighting problems, or wasted fuel or heat.

Holds up to 2 oz of fuel

This makes it a great two person homemade stove or winter camp stove.

Long efficient simmer

The simmer ring raises the flame closer to the pot and slows both fuel and air supply to make it more efficient and less vulnerable to wind. It will boil one quart and hold a simmer for 40 min. - up to 20 min. on 2/3 oz. of fuel.

Stable efficient support

The three-spike support provides maximum flame contact, minimum heat loss, and a wide, non slip base for large pots. Reverse the support for smaller pots.

No seams to break & leak

All parts are heavy impact forged aluminum and there are no sealed seams, and no glue, tape, or solder to fail.

Small & easy to backpack

The stove is small enough (1 1/4 x 2 3/4 dia.) to fit into a plastic pack cup. The support folds flat. Stove, pot, cup, wind screen, & 8 oz. of fuel fit inside a small pot.

Insulated base

The lid/base is used to maintain thermal efficiency, makes it safer, and able to burn on a cold wet ground or a wood table top.

Burner lid

If the lid/base is not needed under the stove, it can be use to stop the burn, save fuel, and/or protect the burner when packing.

Independent Tests



Boiling One Quart

The following were the best boil times for 56 tests conducted by physicist Mike Martin using a variety of stoves and configurations.

Stove	Pot	Water Used (oz)	Windscreen	Fuel Type	Fuel Used (ml)	Boil Time (m:s)	Burn Time (m:s)	Est. fuel used to Boil (ml)
Turbo F	Titan Kettle	16	None	Sunnyside Den. Alcohol	20	07:10	09:00	15.9
Trangia Burner	Titan Kettle	16	Tall, full	S-L-X Denatured Alcohol	20	06:40	08:43	15.3
Turbo IIF	Open Country 2L	16	None	Everclear	20	05:40	07:16	15.6
Penny	Open Country 2L	16	None	Everclear	20	03:59	06:11	12.9

Most alcohol stoves cannot boil one quart, so the Penny was compared to other kinds of stoves below.

Gas Stovetop	Open Country 2L	32	None	Natural Gas		07:30	n/a	Unknown
Xponent Xtreme	Open Country 2L	32	None	Butane/Propane Mix	30	04:15	n/a	20g
Penny	Open Country 2L	32	Tall, full	S-L-X Denatured Alcohol	40	07:50	09:49	31.9

For complete Mike Martin test information go to:

<http://www.nic.edu/compsci/mamartin/files/burntest.xls>
<http://www.nic.edu/compsci/mamartin/files/burnnotes.txt>

Compare the Penny totals above with tests of the Cat, Pepsi, and other commercial stoves at:

<http://art.simon.tripod.com/Stoves/>
<http://www.thru-hiker.com/articles.asp?subcat=2&cid=38>

Web Reviews



Brad Monsma's Penny visits Whitney

"Penny...wow!

Just a quick note to say that your stove rocks. I discovered it while researching a replacement for my old Whisperlight... I'm giddy at boiling 2 cups in a little over four minutes on the Penny. The real test will come on Mt. Whitney in a month . . ."

"Penny Stove on Whitney

I just carried the penny stove on its first trip. It worked great in the cold and high elevation... I've got a little video clip of it boiling at the top, but it wouldn't sent because of the size... Thanks again for a great invention."

Brad Monsma

~

..."Just back from a very cold 4 days hiking north Shenandoah, snowed last day. First day with a wind chill factor of -9 degrees, temp was 14 degrees. Made and used for the first time a "penny stove" for the trip. Performed like a champ!!! Not affected by wind, or cold. Boiled water in minutes, simmers forever. Never have used alcohol stove before..... I would recommend this stove to anyone, anywhere."
 asphalt commando

~

"Having constructed and tested nearly every homemade version as described on the alcoholstoves website I was pretty impressed with Mark's claims for his penny regulator version using the Heineken beer cans. Soo...I had to make a couple just to check it out. The results of my comparison tests were pretty amazing! The penny stove burned much more consistently without flameups, it did not need a special primer ring to preheat the fuel, and it actually brought 2C tap water (71F) to boil in 3.5 minutes!!! Starting with 1 oz fuel, I had another 3 minutes of burn time after achieving the boil.

... I timed the boil to where it actually lifted the lid, not to where steam was observed. Also consider that I live in Aurora CO where the elevation is in excess of 5000 ft, therefore the boiling point is somewhat lower... Guess what I did with all my other stove versions! (deep 6)"

Lin McEnergy

~

"I made a stove based on your instructions and it was the only source of heating water that I took on a 8 day 7 night hike through the Olympic National Park in Washington State. It worked faster than the white gas stove the other two in my group shared. The weather was cold and wet, but the stove worked flawlessly. Of all the designs out there, the penny alcohol stove is easiest to make, pack and refuel. Best of all, I made it myself and everyone I camp with has been amazed and impressed. The penny weighs as much as the stove. My views are my own and may not reflect the views of my employer, wife, or my dog. But I do strive to keep all of them happy."
Russ Whitt
~

"My wife and I have been backpacking for approx. 1 year now and as most, we have gotten addicted and into lighter and better. We bought a Snow Peak GigaPower stove and a Vargo Triad titanium alcohol stove. As part of my research into lighter gear, I stumbled across your design and decided to give it a try with both soda cans and the Heiny cans. The Heiny, in my opinion, is far superior (more durable).

Recently, we took a 3 day trip into the Sipsey Wilderness in Northern Alabama. We took along all three stoves to try them out side by side. Your design out performed the others and I have been raving to my friends about it."
Thanks a million!
Milton E. Barker, Jr. a/k/a Caveman, Birmingham, Alabama
~

"The Penny Stove exceeds my expectations!
Burn time is really what I was looking for, just put the penny in place and fill the top of the burner and your going to have at least 30 minutes of burn time...After the little guy gets hot and starts boiling the fuel it blows the fire out the jets and I mean this guy heats! Like a small blow torch! Perfect size because it would fit right in your coat pocket if need be!
If you enjoy packing...try this stove ...its called the Penny Stove I am sure you already know about it..But it is certainly worth your troubles to make..They suggest using a Beer can and as I don't drink that often I used coke and pepsi cans...I was really surprised at how easy it is to make."
Blue
~

"When I read the part about using the popular "penny stove" I had to chime in. I found the instructions for building the penny stove on the internet back around Christmas time and decided to build one. The instructions were very clear and the cutting and assembly was quite easy. I've since taken the penny stove on 2 camping trips and simply love the stove. I've since built a couple more for my daughters and friends.
There are 7 of us going on a 5 day trip to the Grand Canyon and 4 of us are sharing 2 of the penny stoves. Susan - I don't know if you've had a chance to use the simmer ring, but it works great too! It's pretty cool building something that actually works!"
kl7rs, Sun May 8, 2005 4:14 pm, Ultralight Backpacking] Digest Number 379
~

"Hello, I have enjoyed making and using this design of stove. Heineken is definitely best, the premium cans (for burner) are a little different but epoxy glue works fine... Brilliant, as little as 10ml (we are quasi decimal here in UK!) will boil a 300ml mug. My wife thinks I've gone nuts staying late out in the garage! But I explain to her you can see the flames..... Ha! No Pacific Crest trail here, just the mountains (hills) of Snowdonia."
Thanks, Chris Harper, Capel Curig, North Wales
~

"Your Penny Stove has been my favorite of all the stoves I've made, and I was thrilled to be able to use it out on the trail last summer. It really burned well!"
Debbie Kramer
~

"I too used to like the beverage can stove, but have become a penny stove convert. It's more effecient and actually easier to build... I think it is a superior solution."
Carey Parks
~

"I believe there was a noticeable spike in the consumption of Heineken beer the week Mark Jurey announced his penny stove to the lightweight backpacking community. :^) The directions for making the stove are very clear and well done."
Don Ladigin
~

"While your stove and backward garden designs might appear "simple", "elegant" seems much more appropriate. The designs only look simple initially; in reality they embody complex design ideas boiled down to simple implementations."
Mark Warren
~

"I really like your stove design. It heats fast like the pressurized white gas stove, is reasonably efficient like the best of the open alcohol designs and best of all, it looks "cool" with the way the jets shoot the flames out -- like the Viking gas cooktop in my wife's kitchen!"
Cutman
~

"First, I'd like to add my complements on Mark J.'s stove: A beautiful, simple, elegant design. Great job, and thanks for sharing with this list!"
"I'm glad your stove is getting the accolades it deserves. It really is a beautiful design... The most surprising result of my testing has been how well the fuel efficiency of alcohol compares to the alternatives -- both the theoretical BTU/oz of the fuels when you consider the container weight, and the performance of actual stoves."
Mike Martin
~

"I have be able to generate a burn time of 8 minutes with 30 ml fuel. Temperature change of 157 degrees, effeciency about 60%... The stove gives this result with one of faster burn times, and offers one of the easist consturctions available (Only Altoids/perlite stoves and fuzzy's stove are easier). I am impressed with the stoves overall qualities, easy of constrution and use. I suspect that effeciency of stoves is increased with approppiate windscreens to help retain heat... Nice job on this stove. I will use it."
Mark Redlin
~

"My favorite homemade stoves because the are easy to make and effective are the Penny Alcohol Stove and the Cat Stove."
Mark Verber's Outdoor Gear recommendations
<http://www.verber.com/mark/outdoors/gear/misc.html>
~

"This plan is human ingenuity at its very finest. For the cost of a few beers (plus one penny), you can build yourself a camping stove like no other. It's fuel efficient, takes up little space in your backpack, and is about as safe as such an item can be. The author's site has a decent tutorial on how to build this Penny Stove and lots of scientific data to back up the claim that it's the best travel stove for any money. If you've got the time, they've got the plans."
Jules Allen in the St. Ptersburg Times
~

"I recently had the opportunity to enjoy your wonderful Penny Alcohol Stove site. I built the stove, and it works exactly as described. I have never had an alcohol stove- until recently I had a Seva 123 (how I miss that stove!) but I was thrilled with how well your design works."
R. Mark Adams, Ph.D.
~

Links

[Making the Penny Alcohol Stove](#)
Instructions and frequently asked questions

[Ask me a question](#)
Or share your experiences

[Zen Alcohol Stoves](#)
Complete list of homemade stove ideas

[Anti Gravity Gear.com](#)
Lots of information - great food & gear

[..c studio](#)
Great web design / graphic design services

[My Backward Garden](#)
Learning to live and grow with nature

[Making the Penny Wood Alcohol Stove](#)
Based on Ray Garlington's "inverted downdraft gasifier" research, it also works as a pot support for the Penny Alcohol stove.



Disclaimer & Warning

Information on this site is provided for educational purposes only.

Neither the webmaster nor anyone else whose information may be included on, or linked to, this web site can attest to or endorse the safety of using any techniques, equipment, supplies or services evaluated or referred to therein. Any endorsement or recommendation is limited solely to the evaluator's opinion about their effectiveness when used for their intended purpose in accordance with safe operating procedures, and if available, in accordance with any instructions provided by the inventor or manufacturer. Some survival and outdoors equipment and supplies are inherently unsafe and can injure, maim or kill even when used appropriately.

Endorsement or recommendation of any equipment, supplies, services or techniques does not constitute a guaranty or warranty the equipment, supplies, services or techniques will function when needed.

In daylight you may not be able to see a flame or hear an audible sound from an alcohol stove. A windscreen wrapped partially around the stove may aid in seeing a flame more easily.

DO NOT OVERFILL STOVE. A space above the fuel inside stove is necessary for proper operation and overfilled liquid fuel may be ejected instead of alcohol vapor, creating a potentially hazardous fire.

Individuals not trained and experienced in use of tools and techniques mentioned on this page should not attempt creating a stove without supervision by someone with proper experience and training.

Eye protection should be worn whenever flying metal is possible (such as whenever a drill, hammer or knife is used).

Lighting of stoves should be attempted in a area not prone to fire.

Use of gasoline, or any other petroleum products in these stoves may result in severe burns and/or death.

©2004,5,6 mark jurey