



## Cardboard Box Oven

*Submitted on January 3, 1992 by: Chip Reinhardt, Scoutmaster, Troop 451, Durham, North Carolina*

In response to a couple of requests, this is a description of how to construct a cardboard box oven. We have been using these in our Scout troop for about 5-6 years now, and they are always a big hit with the boys. With a cardboard box oven, you can pretty much bake in the outdoors anything you could bake at home in a conventional oven. The first known reference I have to this oven is a copy of an article I saw from a 1953 issue of Boys Life. I first saw it used by another troop here in Durham, but no Scouter is EVER above borrowing a great idea!

### Materials needed:

- ⚡ A cardboard box about the size of the boxes that 10 reams of copy paper comes in
- ⚡ A pint of contact cement OR a staple gun with SMALL staples
- ⚡ Half-dozen coathangers with bolt cutters OR a half-dozen batt insulation supports
- ⚡ A roll of heavy duty Reynolds aluminum foil (wider is better than narrow)
- ⚡ Shallow aluminum or steel dish or bowl
- ⚡ Sharp Knife to cut cardboard and scissors to cut aluminum foil.
- ⚡ Duct tape (optional)

### How to build:

1. The finished product will have a door wide enough to accommodate a 9" pie pan on a rack made of metal rods, and long enough to insert a dish full of hot coals into the bottom a sufficient distance below the rack of metal rods. Determine which side of the box you will cut the door. If your box is the type that has a removable top, you can configure the oven without a door and simply remove the top when you need access. However, I have found this design to be inefficient. It is best to start with a box with all sides fastened down to create a fully enclosed space, then cut a door into one of the sides.
2. Cut the door into one of the box sides. You can cut the door almost the entire width of the box so it will "hinge" near a corner of the box and will "latch" on about 1-3 inches of the remaining box side. The length of the door should leave about 4 inches from the top and bottom of the box.
3. Fasten aluminum foil to the entire INSIDE of the box, applying through the door opening you have cut. Do not leave ANY cardboard exposed on the inside of the box. I use contact cement to fasten the foil to the inside of the box, although you can also use staples. IF YOU USE CONTACT CEMENT, BE SURE THAT YOU ALLOW 3-4 DAYS FOR CURING BEFORE USING THE OVEN!!! If any of the

aluminum foil tears while applying, just cut patches and glue or staple over. You may get better results if you use two layers of foil, although one will be sufficient. Do not forget to put foil on the inside of the door you cut! Also, when you get to the door side of the box, make sure the foil "wraps" around the door edges and the "jamb" edges. You can get a nice finished look by taking duct tape and fastening down the aluminum foil that wrapped around the door edges to the outside, and also applying it to the outside of the box to reinforce corners, etc. Be careful, though, not to get the duct tape too close to the door, because it can melt from the heat.

4. Now you will make the rack using metal rods. Here you can use your imagination. A quick and easy way is to take old coathangers, use boltcutters to cut the flat side out, and create 6-8 rods. My favorite is using those steel insulation supports used to support batt insulation on the underside of a floor. I even have one oven design that used an old rack from a small discarded conventional oven. Any way you do it, you will need to position the rack about halfway between the bottom and top of the box. If you cut the door right, this will be about the middle of the door, too. Once you have cut the rods, punch them through from one side of the box to the other side of the box. You can then use pliers to bend the protruding edges down. This will keep the rods from moving around. **BE SURE THAT ALL RODS ARE LEVEL WITH THE BOTTOM OF THE BOX.** I usually cut a small measuring stick to my desired height from the bottom of the box to the rack level, and then make sure that I measure the entry AND exit point of EACH rod to see that it is level from the bottom. It is not particularly important how many rods you use, or how evenly spaced apart they are, just as long as you have enough rods to hold the weight the item being baked, and those rods are level with the bottom of the box.
5. Your oven is almost finished! You now need to create the heat source. This is done by using a shallow steel or aluminum pan, dish or bowl, sitting on pan supports. The pan supports can be a small rack, rolled up balls of foil, rocks, or some other such device which will keep the pan a small distance OFF the bottom of the box. I usually line the pan with aluminum foil also, just for easy cleaning.
6. Once you have fully lined the box with foil, built the rack and gotten the pan and pan supports ready, you are ready to BAKE!

## USING THE OVEN

When you get ready to use the oven, you start a sufficient number of charcoal briquettes (see info below on how many to use) OUTSIDE the oven in the pan you have prepared. A good high-quality briquette like Kingsford works best, but if you use off-brands, be sure to add 3-4 more briquettes than would normally be called for. DO NOT use coals from campfire wood. They smoke too much and will not go the distance for you. Once the briquettes have all turned to WHITE (and NOT BEFORE!), take a pair of channel locks, or other pickup tool or fireproof glove, and insert the dish of white coals into the bottom of the oven, making sure that it sits squarely on the pan supports.

The number of briquettes roughly follows this formula: One briquette equals 45 degrees of oven heat. Therefore, if your recipe calls for an oven temperature of 450 degrees, you will get 10 full briquettes ready. If you are winter camping and the outside temperature falls below about 40 degrees, I find that I usually have to compensate by adding about 2 more

briquettes.

Since the box is a miniature oven, it is important that you keep it LEVEL while cooking. Position the box on the ground or on a table in such a way that it will remain level, and out of the way of normal Scout horseplay!

From here on out you just follow the directions on the goody you are baking. Mix up the batter, put into a greased pan, and insert into your oven on the rack. Then close the door, check your watch and bake for the time required by your recipe. NOTE: I have found in some recipes that some cracks are needed in the oven to allow the escape of moisture. You may want to leave the door slightly ajar, or you may want to get fancy and cut a small "vent" door in the top of the oven that you can open and close when necessary. Also, if you put more coals in than the formula calls for, you may need to check the oven a little sooner to avoid burning.

MMMMmmmmm. Nothing better than hot biscuits, muffins or cornbread for breakfast, and brownies, fudge, or cake for dessert at dinnertime.

**Bon appetit!**

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