Box Oven Tips (fwd)

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Hi all,

The following treatise on constructing a box oven is based on a number of e-mails sent to me by 8 or 10 of you several weeks ago in response to a question. Several on the list asked me to compile the responses I got; what follows is the result. I've eliminated redundancies, but kept some interesting variations on the basic theme of an aluminum-lined cardboard box
with coat hanger racks to hold the food.

I hope this is helpful to the rest of you. Thanks again for the great input to all those who responded!

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BOX OVEN CONSTRUCTION, CARE, AND MAINTENANCE

1. The first step is to find a suitable box. Most correspondents prefer copier paper boxes, with the completely-removable lid serving as the door. The box would sit on one end. The next most popular box was a wine box, only with this type of box, one is supposed to leave the lid attached (i.e.,
only cut around three sides of the side of the box that will serve as the door). This box oven should sit so that the door hinge is on the top. Consider the size of the box as well; you don't need a huge one if you're only going to cook pie pan-sized portions of food.

2. Once you have selected a box, line the inside (both box and lid) with heavy duty aluminum foil (several correspondents recommended two or even three layers, especially on the bottom). It is very important that the entire inside of the box be covered, with no cardboard showing. Using 18" foil instead of 12" foil was also recommended, as you want to have as few seams as possible.

3. Fasten the foil in place. One can use staples, or brass paper fasteners--the kind with two prongs that bend back after you have pushed them through the cardboard. Also recommended was aluminized duct tape, which is a better reflector than regular duct tape. Do not use tacks--they can and do fall out into the food.

4. For the racks, most people used straightened, unpainted coat hangers, cut to fit, although one correspondent recommended against cutting the wire,
as the ends were very sharp (instead, simply bend the hangers into the appropriate shape). Another correspondent used foil-wrapped green sticks

that were simply thrown away after each use.

5. Use a nail or similar tool to punch holes in the sides of the box so the coat hanger wires can be passed through the inside of the oven to form wire shelves. You will need at least 3 wires per shelf. You will also need two shelves--one near the bottom of the oven to hold the pan for the coals so it
doesn't come in contact with the foil-covered cardboard, and one about half-way toward the top to hold the pan with the food. Generally, place the top one low enough from the top of your oven to allow ample room for baking,
and high enough above the heat source to avoid scorching on the bottom. The lower rack should be about one inch above the bottom of the oven.

6. Pass each coat hanger wire through one hole and across to the hole on the
opposite side of the oven.

8. Cut off excess wire, but leave enough on the ends to bend down to hold the wires in place. A more elaborate but useful variation is to cut small pieces of wood, drill holes in them corresponding to the wire holes in the sides of the oven, thread the wire through the wood, then bend down the wire, securing the wood pieces to the sides of the oven. These add strength, and also serve as handles in case you have to move the oven while you are cooking.

9. Do not cover the racks with aluminum foil to prevent dripping. This acts as a heat and air flow barrier which compromises the oven's efficiency.

10. Of course, ventilation is necessary to keep the coals going. There are several approaches. One is simply to cut a closeable vent hole in the box, opening and closing as needed. Another approach is to prop the oven door open at the bottom to allow air inside.

11. A third, more elaborate approach, is to get a 6-inch long piece of half-inch plastic tubing. Cut this in half to form two 3-inch long pieces. Make a half-inch diameter hole in the back of the box near the top of the oven. Insert a small portion of one piece of tubing through the hole and secure with duct tape on the outside of the box. Do the same near the bottom
of the oven lid with the second piece of tubing (NOTE: some people like larger diameter tubing with a longer draw).

12. Test fit the lid on the oven if you are using a copier paper box; you may need two slits in the lip panels of the lid to make the lid easy to install/remove without tearing up the foil lining. A "neat trick" with the lid recommended by one correspondent is to cut it completely off and use a transparent oven cooking bag instead. Split the oven bag along the side, opening it up to a single layer. Then use clothes pins to clip the bag to the top of the box (pins should be 3 - 4 inches apart to make a good seal). By doing this, you can watch what you're cooking, and it also makes demonstrations easier.

13. When the charcoal is ready, put the appropriate number of briquettes into the coal pan on the bottom rack. If you don't want to make a bottom shelf, other ways to protect the bottom include setting the coal pan on an inverted pie plate, or resting the coal pan on trivets or sand-filled tuna

cans.

14. The formula usually used for gauging temperature is 1 briquette for the oven, and then 1 for each 50 degrees of desired temperature. Thus, under this formula, for a 350 degree oven, one would use 8 coals. However, another writer thinks a more realistic measurement of temperature is 30-40 degrees per briquette. A more elaborate and (no doubt) accurate way to gauge
temperature is to insert a candy thermometer through the top of the oven, keep it there, and adjust the amount of coals accordingly until the oven is at the right temperature.

15. Place the food pan on the top shelf. Install the oven door and time the cooking according to the recipe. If necessary (and you have another source of ventilation) keep the door shut with a rock or piece of wood propped against it. Also, if necessary to protect the surface underneath the oven, place the oven on bricks, rocks, cinder blocks, etc.

A Couple of Variations...

One correspondent offered a simple variation on the above--basically an aluminum-foil lined box that you would use to cover a small grill or grate of coals in case a rainstorm comes up while you are cooking outdoors. You make the box big enough to fit over whatever grill you usually use to cook on (and cover the outside with foil, too). Then, if it rains while you are cooking outside, you simply place the box over the coals, and prop up the edges of the box with sand-filled cans to allow air to get inside. With a lid, it also can serve to keep already-cooked food warm.

Another variation is a collapsible box oven, suitable for conserving space or using on a backpacking trip. To make this:

1. Purchase an unassembled box big enough to fit your largest pan.

2. Cut a door in one side and line the entire inside of the box and door with heavy duty foil without permanently assembling the box; this allows you
to fold it flat to transport.

3. Use silver duct tape on the outside to firmly attach the foil.

4. Purchase a cooling rack that fits into the box when it is set up; use weighted cans to support the rack when you're cooking with it.

5. This oven can be set up in seconds; simply fold the top down to bake. The door allows access without letting all the heat out.

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