Rocket Stove Instructions[1]

The design of the rocket stove is a chamber that burns smoke (which is just unburned fuel). It is also known as the smokeless cooking stove. Initial firing of the paper to ignite the wood may produce a bit of smoke, but once it is burning hot, provided the wood is dry and cured, it will attain a smokeless nature. Laying the bricks out requires a flat surface, either packed earth or a cement bench or a non-burning shelf or ledge - preferably at waist height for easier cooking rather than the traditional squatting. (Refer to the building diagram in how to lay out and stack the bricks.)

Once the brick layers are laid to the height desired and are tightly pressed together (new unused bricks are the best to avoid excess cracks between the bricks), a clay soil mixed with water to make a paste is then applied to all outer surfaces and top of the rocket stove. This is to fill all cracks and stop air intake at all points other than the intake port at the bottom. On the smaller rocket stoves, the clay paste may be used to make three points on the top surface about an inch high for the cooking pot to rest on. The same cubic inches of air flow that enters below needs to exit out the chimney under the cooking pot in order to produce the draft needed to make the hottest fire. On the larger double chamber rocket stove, generally the air space around the cooking pot as it sits flat on the top is sufficient unless it is a giant pot that completely encloses the top port. Another option other than making clay points (knobs) is to use a steel grate 1 inch high, or 3 small 1 inch rocks to place under the pot. The clay paste is to also beautify and cover the bricks and make a more aesthetically appealing stove.

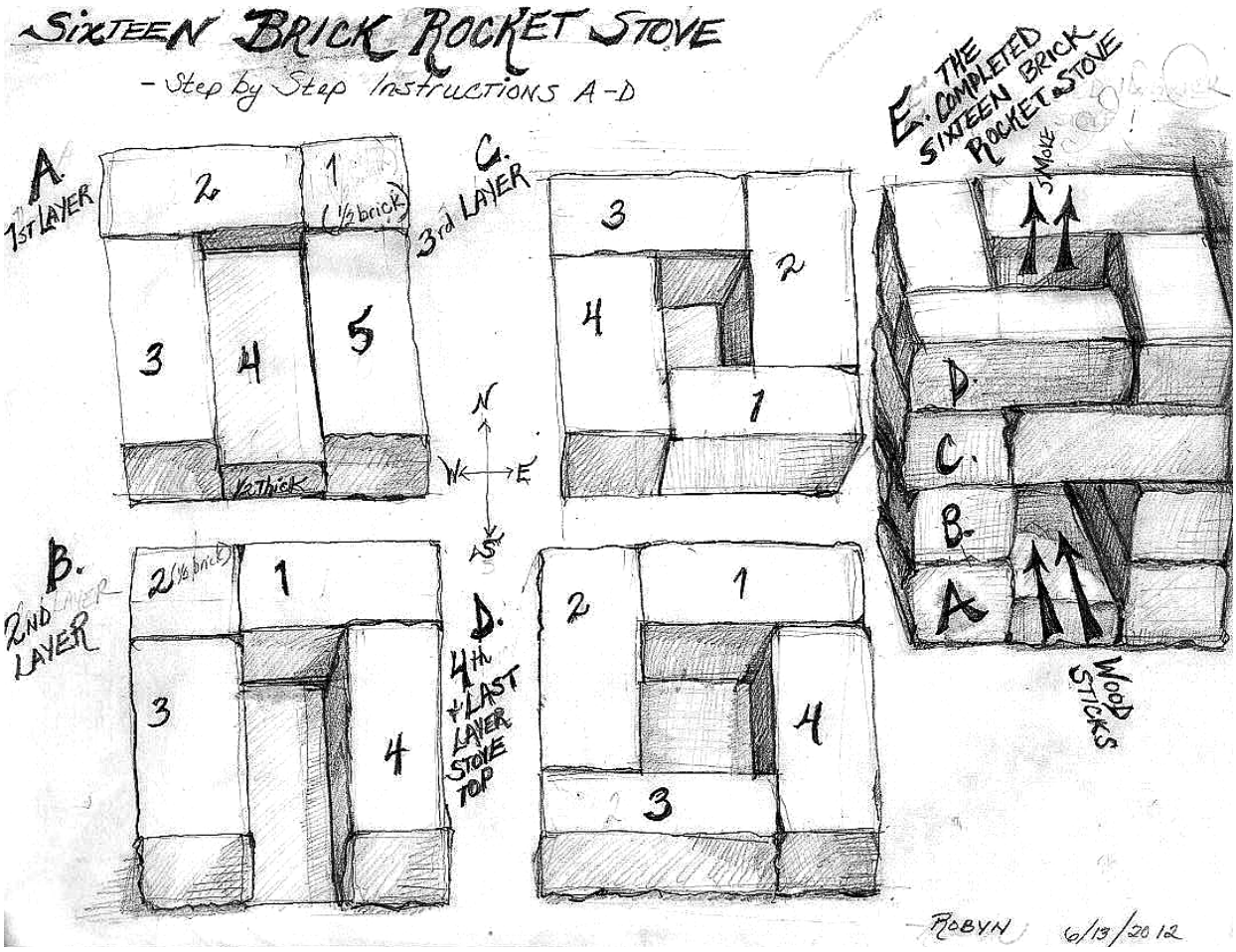
The concept of the rocket stove is to eliminate harmful carcinogenic smoke in the home, thereby eliminating smokers cough and lung disease, by replacing the open fire. It also reduces the demand for firewood harvesting, utilizing smaller branches and twigs, and produces cooked food quicker and much more efficiently.

In many countries where goats are raised, leafy branches are macheted off of trees and taken to the herd for feeding. The goats strip the leaves and leave the branches which are perfect for fuel for the rocket stove. They need to be dried for a month or so, but this is a perfect recycling program. Normally they are simply thrown into a burn pile. As a side note, the Moringa Tree (branches) is a perfect source of firewood for the stove. It is found in many countries and has multiple other uses.

To fire the rocket stove, simply put the constructed screen cage in the bottom of the feed chamber, throw a fair bit of used toilet paper (a perfect way to recycle it) or other combustible product down from the open top, and lay long dried branches or small firewood on top of the screen from the bottom chamber. A small handful of bark or wood chips on top of the paper is also beneficial. The larger rocket stove can accept much larger wood sizes. Throw a lit match in the top, and cooking can begin.

The screen in the bottom needs to be loose enough in its fit that it can be removed easily and often to clean the ash from under it, in order to keep the proper air flow for an efficient burn. You will hear a roar sound from the fire, hence the name rocket stove. This noise is the swirling effect made by its design which burns effectively the smoke.

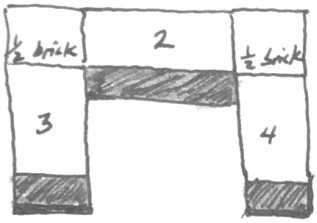
[1] Source: ECHO Florida and Spud Hooley.


SIXTEEN BRICK ROCKET STOVE
- Step by Step Instructions A-D
A.
1st LAYER
2
1
(½ brick)
3
4
5
½ Thick
B.
2ND LAYER
2 (½ brick)
1
3
4
C.
3rd LAYER
3
2
4
1
N
W
E
S
D.
4th + LAST LAYER STOVE TOP
2
1
4
3
E. THE COMPLETED SIXTEEN BRICK ROCKET STOVE
SMOKE
D.
C.
B.
A
WOOD STICKS
ROBYN
6/13/2012

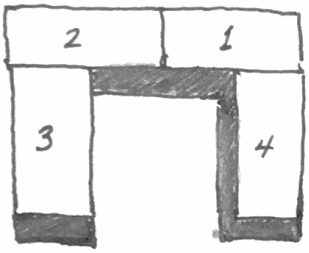
THIRTY THREE BRICK ROCKET STOVE

- Step by Step Instructions A-F

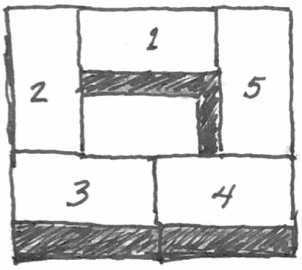
A
1st LAYER



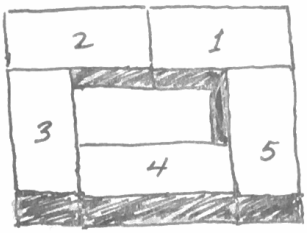
B.
2nd LAYER



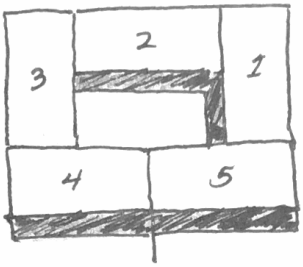
C.
3rd LAYER



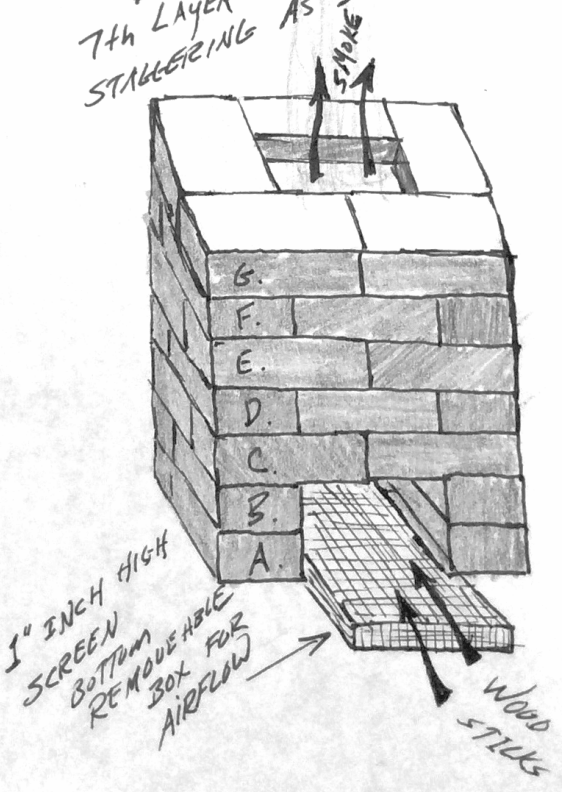
D.
4th LAYER



E.
5th LAYER



F.
6th LAYER
& 7th LAYER IF YOU WISH STAGGERING AS IN D&E



ILLUSTRATED BY S. HOOLEY