Fuel Efficient (Rocket) Stove Instructions

COMPASSIONLINK

Rocket Stoves have many advantages. They save wood and use only about 1/3 of the amount. Rocket Stoves produce less smoke, and they are portable!

Materials:

1 Metal Bucket

3.5 sq. ft. (0.33 sq. meter) of thin, smooth metal (usually 26g –29g thickness), non-galvanized is preferred–commonly called sheet metal, tin, or laminate

12 –small screws (1/2" or1 to 1 -1/4 cm in length –can use wire if no screws available)

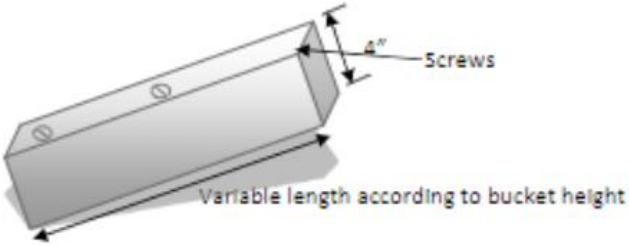
Wood Ashes to fill around the fire tube/duct

Note: If metal buckets are unavailable, square cooking oil cans may be used or the entire stove can be fabricated of sheet metal. Dimensions shown are approximate and are dependent upon the actual bucket dimensions.

Instructions:

Step 1

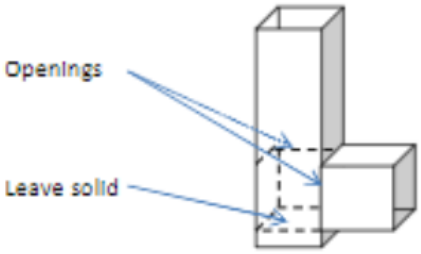
Cut sheet metal and form a 4" (10cm) tube that will extend approx. 1" (2.5cm) above the top of the center of the bucket - typically 14" (35cm) X 18" (45cm) square for this piece. Use the short screws or wire to hold the tube together.



Tip: leave the tube slightly apart until the hole is cut for the "L" shaped tube in step 2.

Step 2

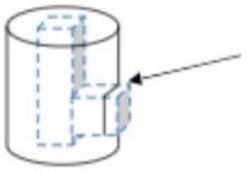
Cut the 2nd piece of sheet metal and form the "L" shaped portion of the tube that will extend approx. 2" (5cm) outside of the bucket - typically 10" (25cm) X 18" (45cm). Cut the hole for the area that will remain open for the fire to exit the top. Secure with screws or wire.



Step 3

Cut an opening in the side of the bucket approximately 2" (5cm) from the bottom edge/rim (usually there is a rim below the actual bottom of the bucket) for the tube to extend out as shown in figure A – this will be where the wood is fed in for the fire. Place the "L" shaped tube in the bucket through the hole. The bottom of the vertical tube should be approx. 1" (2.5cm) off the bottom of the bucket to insulate the heat from the bottom.

Figure A



Note:
The tube should extend 1 ½" – 2" (4cm – 5cm) out from the opening of the bucket.

Figure B

Step 4

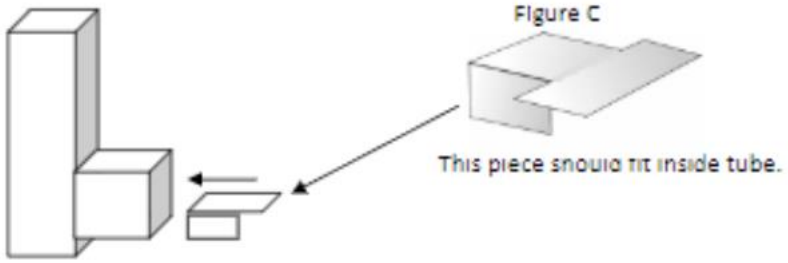
Cut a hole in the center of the top of the bucket for the tube to extend approximately 1” (2.5cm). If there is no top, construct a top of tin or laminate as shown below.

Step 5

Fill the bucket, around and under the tube, with an insulating (and heat resistant) material such as wood ashes, then place the top on the bucket.

Step 6

Cut a piece of sheet metal to fit inside the fire chamber as shown in figure C. The length should be just about 1” (2.5cm) short of touching the back of the vertical tube and approx. ¾” (2cm) in height. This is to allow air to enter the fire chamber and provide an efficient burn.



Step 7

An adjustable “pot collar” should be made of sheet metal that will be placed around the cooking pot, allowing a space of ¼” –½” (6mm –12mm) for the flame to completely surround the pot for the most efficient use of wood. Then a metal grate or slots cut in the top of the tube can be used as the stove cooking surface.

Completed Stove

If you have any questions about this topic, please reach out to CompassionLink at info@compassionlink.org. We will be happy to answer your questions.