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Kraiker's Baker

Reflector Oven designed by Rolf Kraiker

The photo at right shows an assembled Reflector Oven. This is our original unit that we've been using on trips since 1983.

It has stood the test of time quite well.

Click on photo at right to see a larger view.

Click [here](#) to see a view of the oven colapsed for packing

see notes at bottom of page



The plans

Components

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* Notes

Copyright notice

This oven is my own design. I'm offering the plans on a "shareware" basis. This is my contribution to the paddling community and I'm pleased to share the design. Feel free to pass on this information to anyone you'd think is interested as long as it's done in the same spirit I'm offering here - **FOR FREE**. I do **NOT** grant permission to use this design to produce commercial units for sale.

The assembly drawing included elsewhere is not to scale and should only be used as a reference to put the pieces together.

The component drawings are to scale, but they've been reduced on the web pages to make viewing easier. If you download the graphics with a right mouse click (Windows) or hold down the mouse click (Mac), you can save the files to your computer and print them. The components are all too large to fit on a standard letter-size piece of paper, so you may wish to print several sections and piece the complete component together to use as a template.

The metal for the oven is the same type of aluminum used by electronic hobbyists who like to build radio chassis from scratch. Electronics departments in schools or sheet metal shops may be a good source for the metal.

A pair of tin snips, a bench vice and hammer are the only tools necessary. Access to sheet metal cutting and bending equipment or a metal bandsaw would be helpful.

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This is a photo of a unit that's been colapsed for packing.

The oven breaks down in seconds and will pack very nicely in most backpacks. We keep ours in a canvas bag.

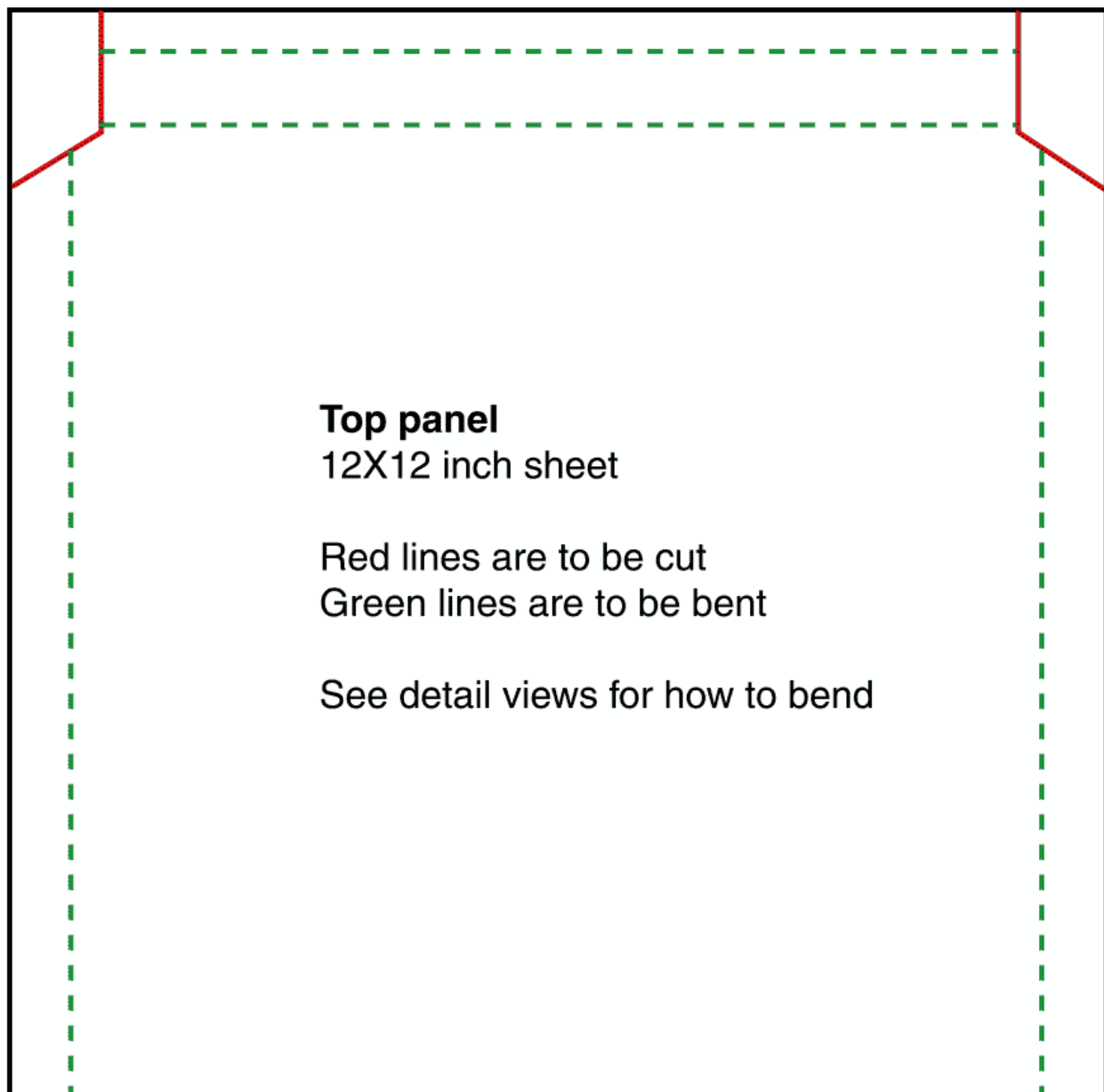
Illustration for top piece

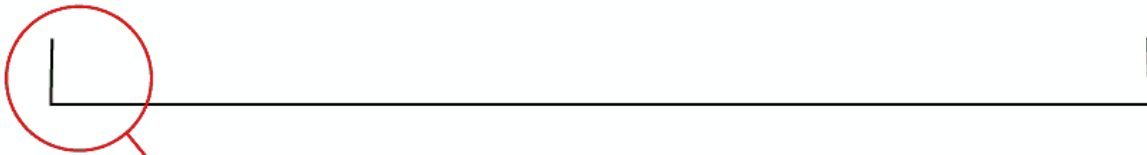
Details for bends appear below main drawing

Note that the inside span between the plate bends must be large enough to go over top (outside) the assembled side pieces. You may wish to hold off bending the left and right sides until the top plate has been installed.

See an [enlarged version](#) of this illustration

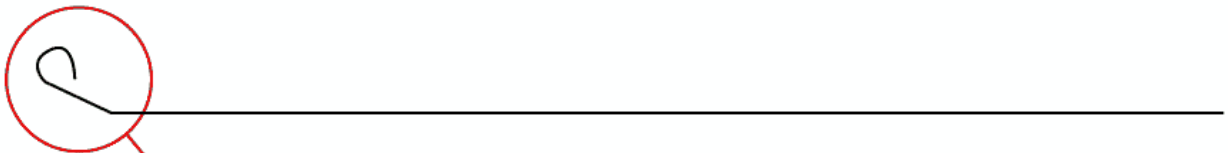
Photo to show bends will be posted later.





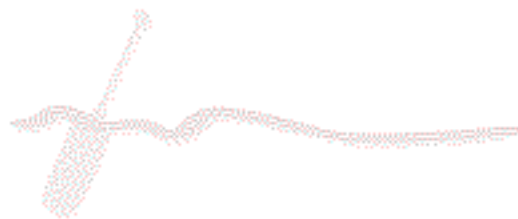
End view

Fold sides in at 90 deg. angle

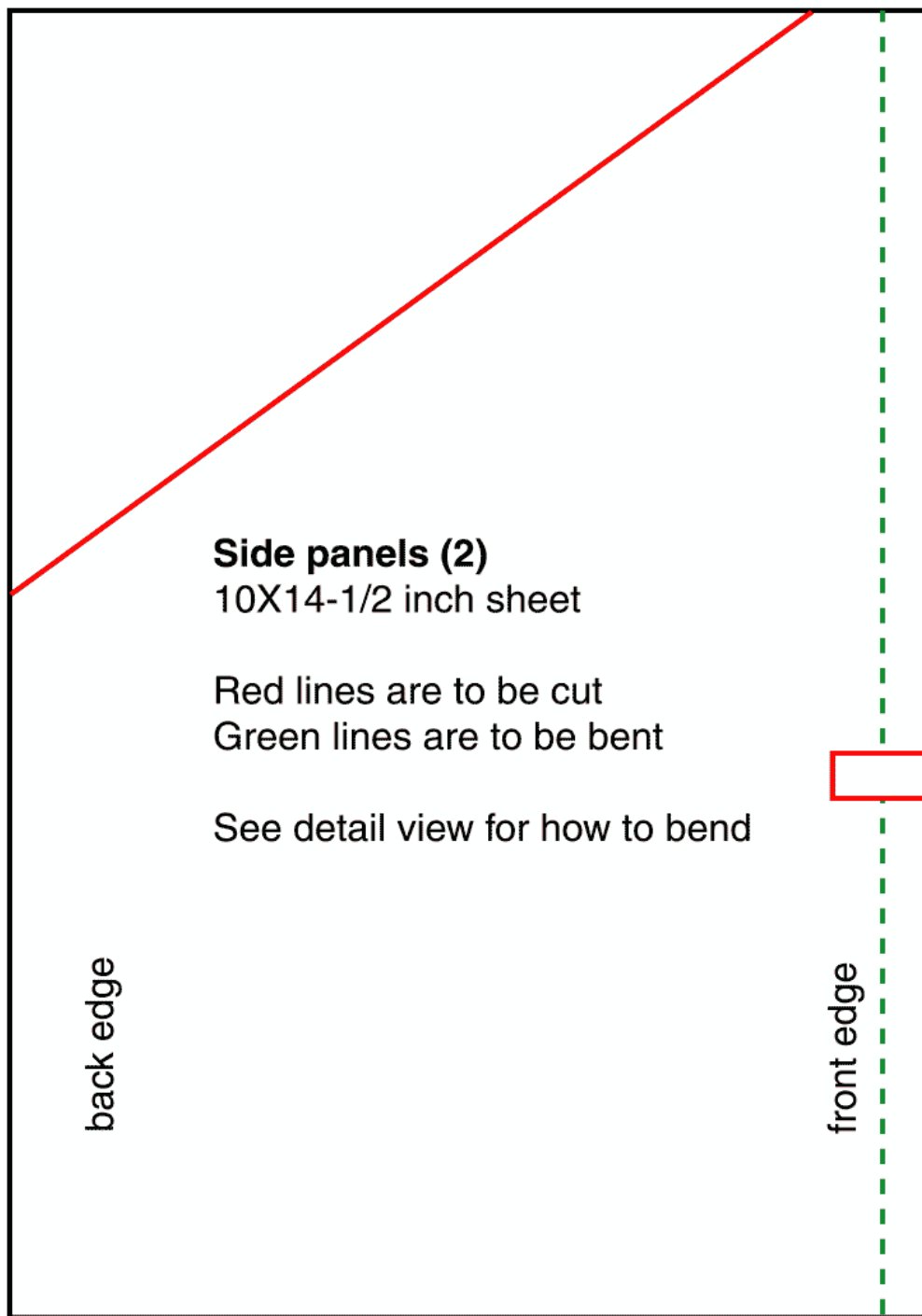


Side view

Fold cut end to slight angle and prepare a roll to enclose wire frame.

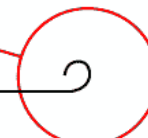


Side panels. Each reflector over requires two of these, but the construction for each is identical.



End view

Fold bend on both panels
in the same direction

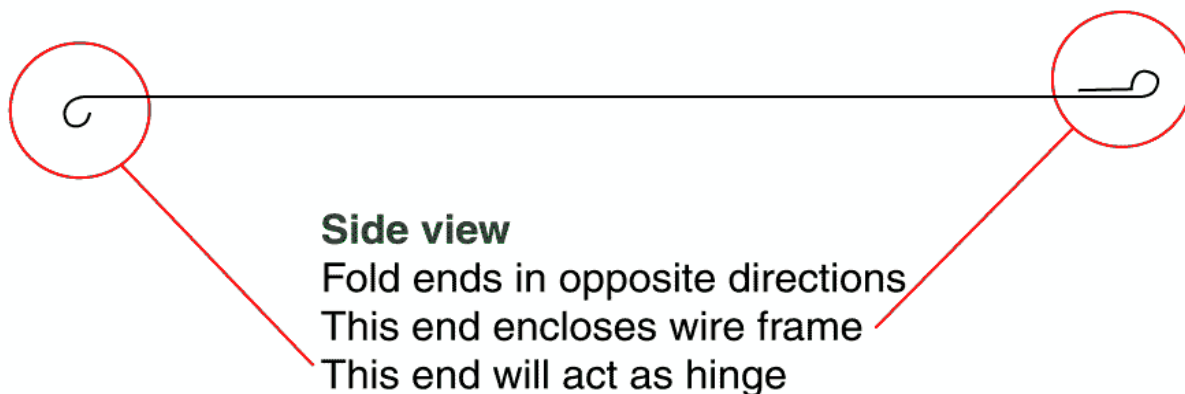
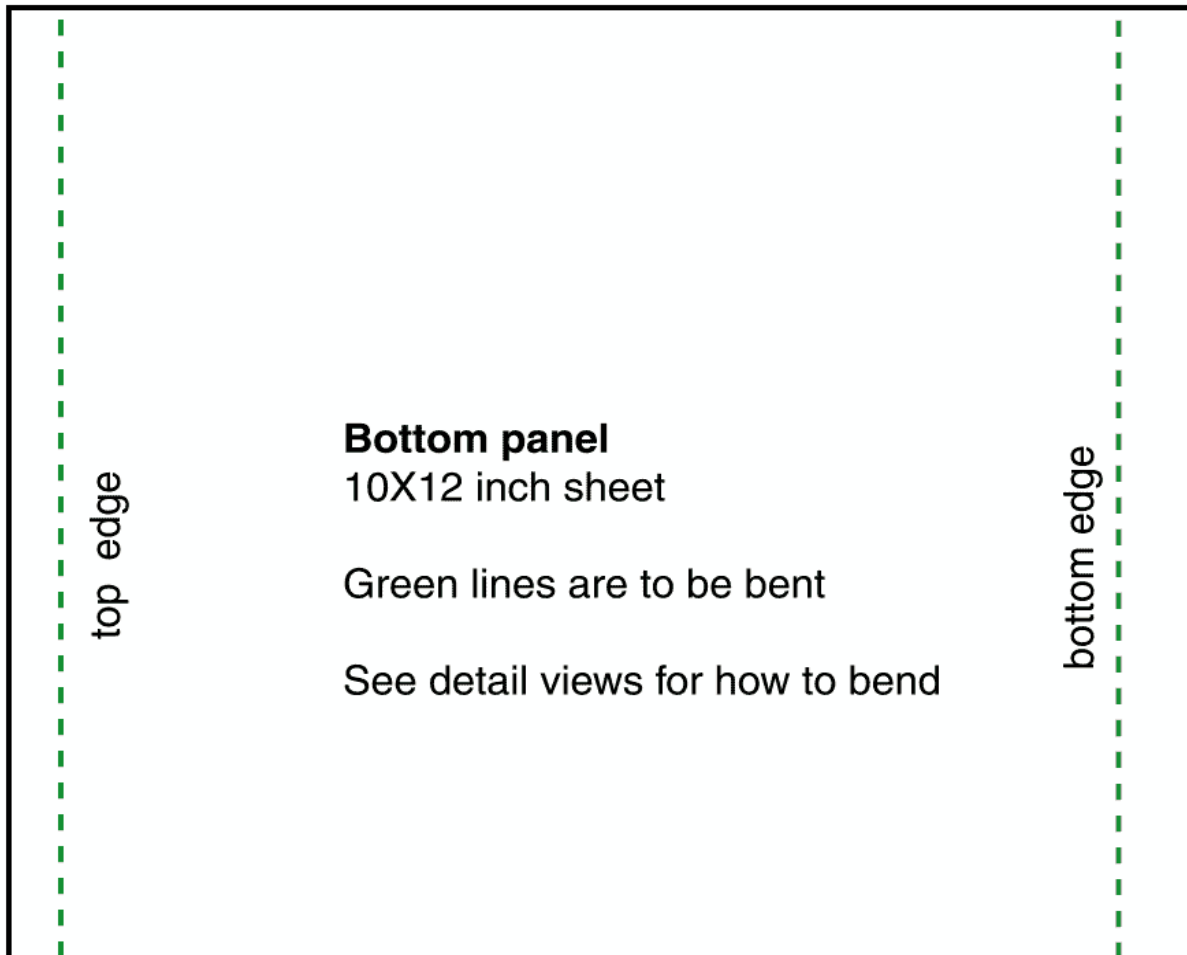




Illustrations for bottom reflector plate

Enlarged version [here](#).

Detail illustration of bends at bottom of page



Click on detail above to see a [photo](#) of how this hinge fits into the cooking plate hinge.



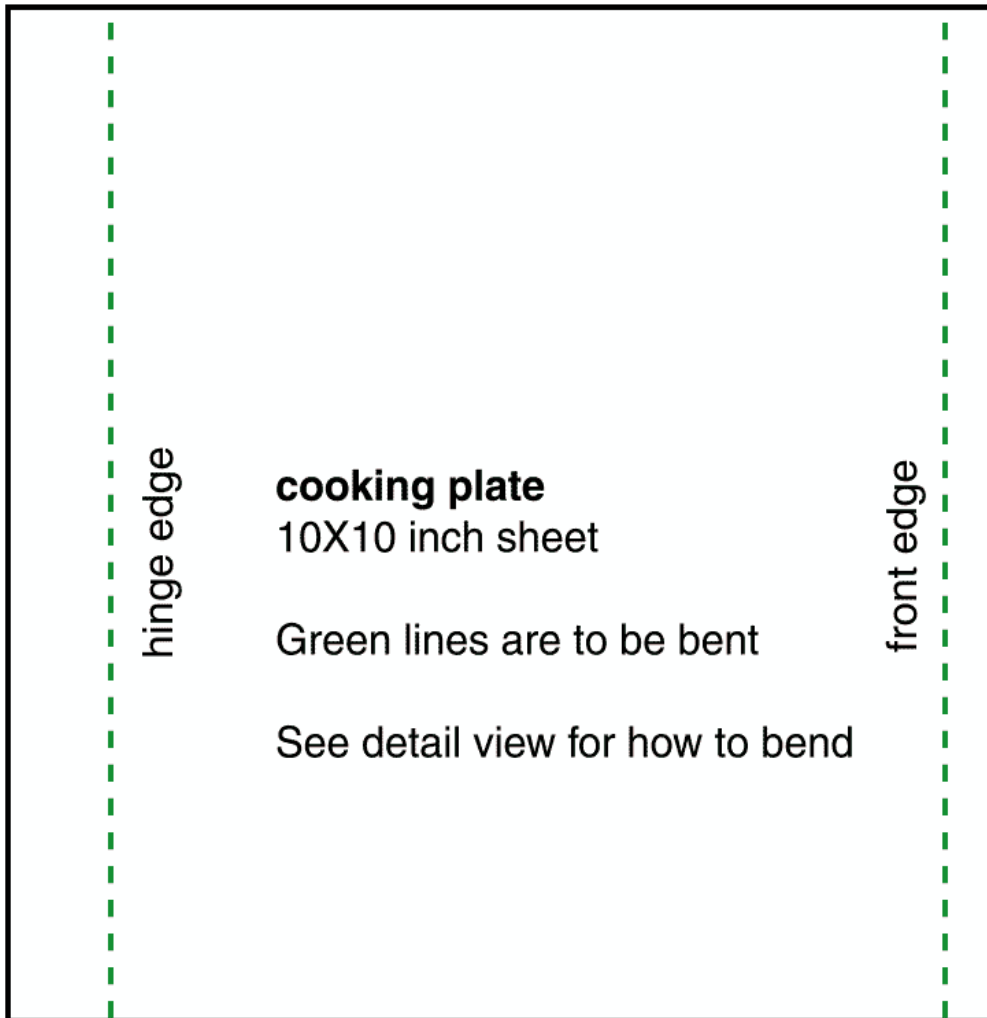
Bottom plate

This piece doesn't get attached to the reflector oven.

The hardest part is bending the hinge fold. Illustration of detail at bottom left links to a [photo](#).

Detail illustration at bottom right links to [photo](#) showing how front edge sits on wire frame.

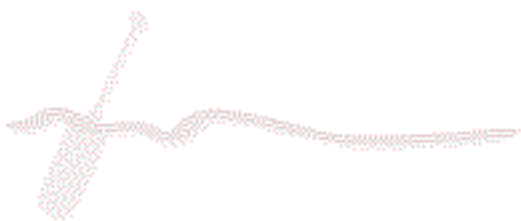
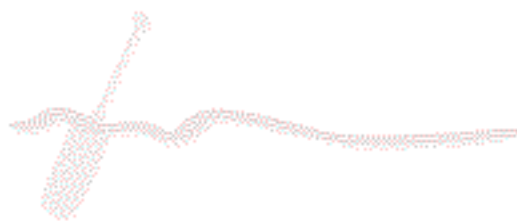
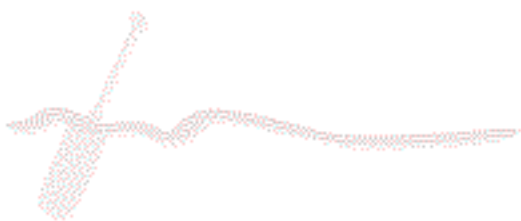
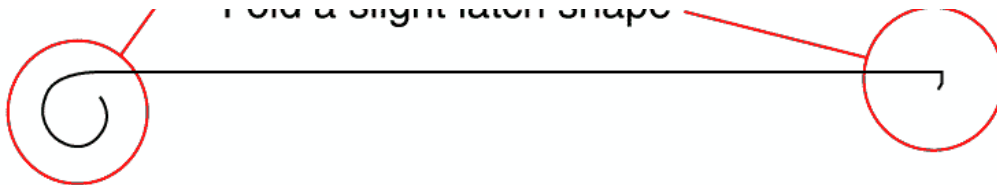
Illustration is linked to an [enlarged version](#).



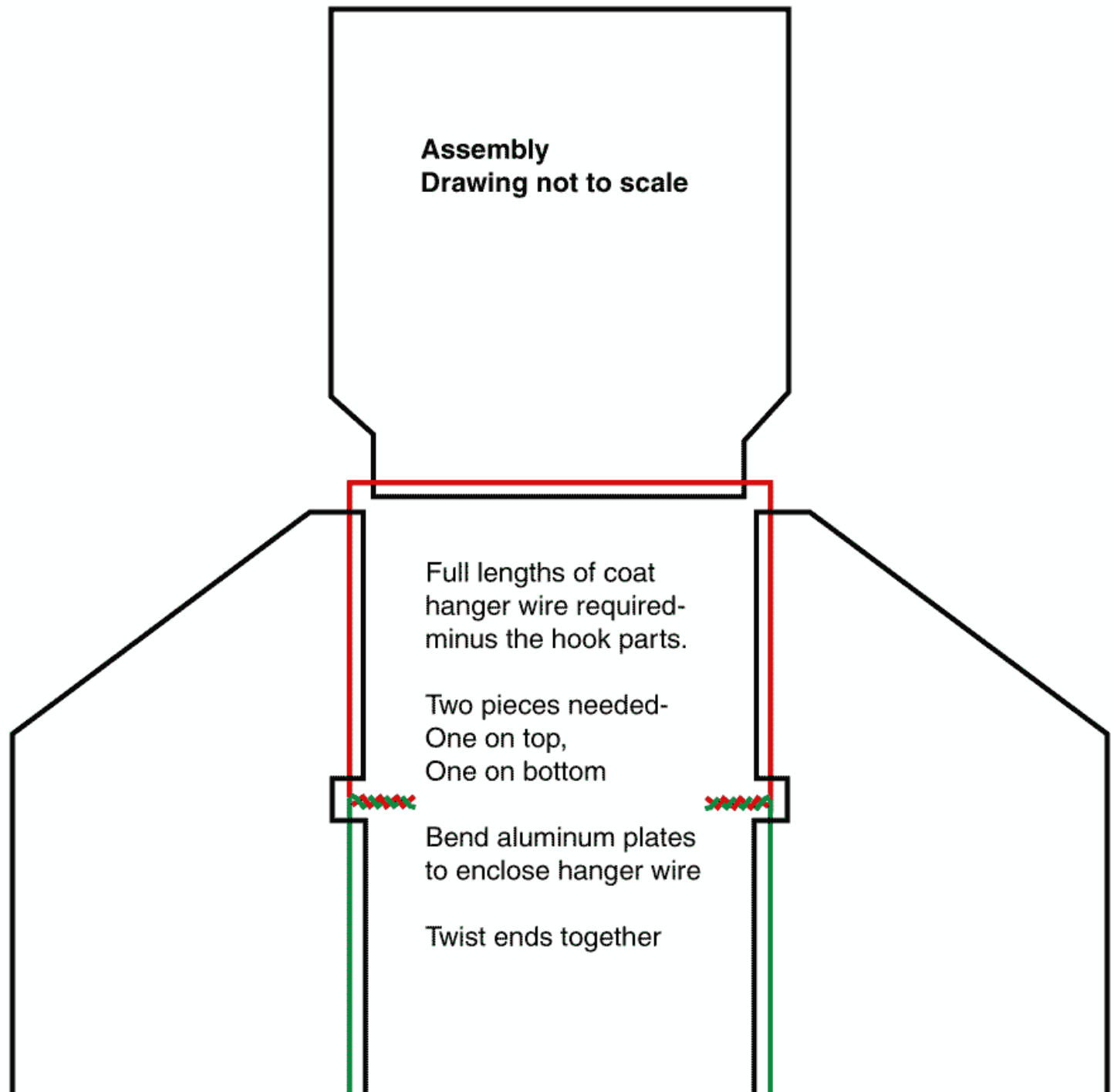
Side view

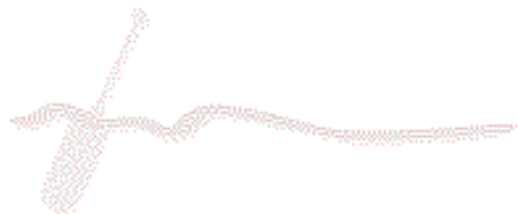
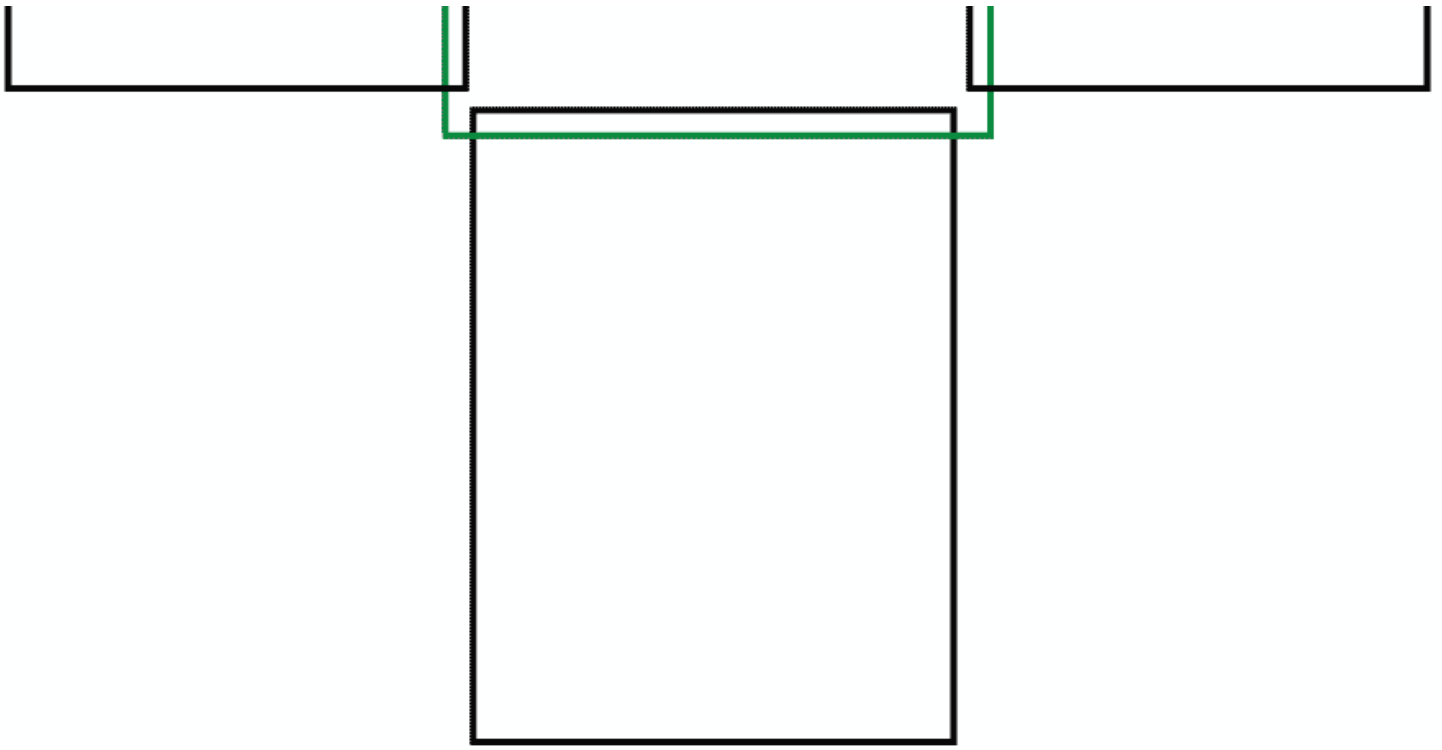
Fold hinge large enough diameter to enclose bottom hinge
Fold a slight latch shape

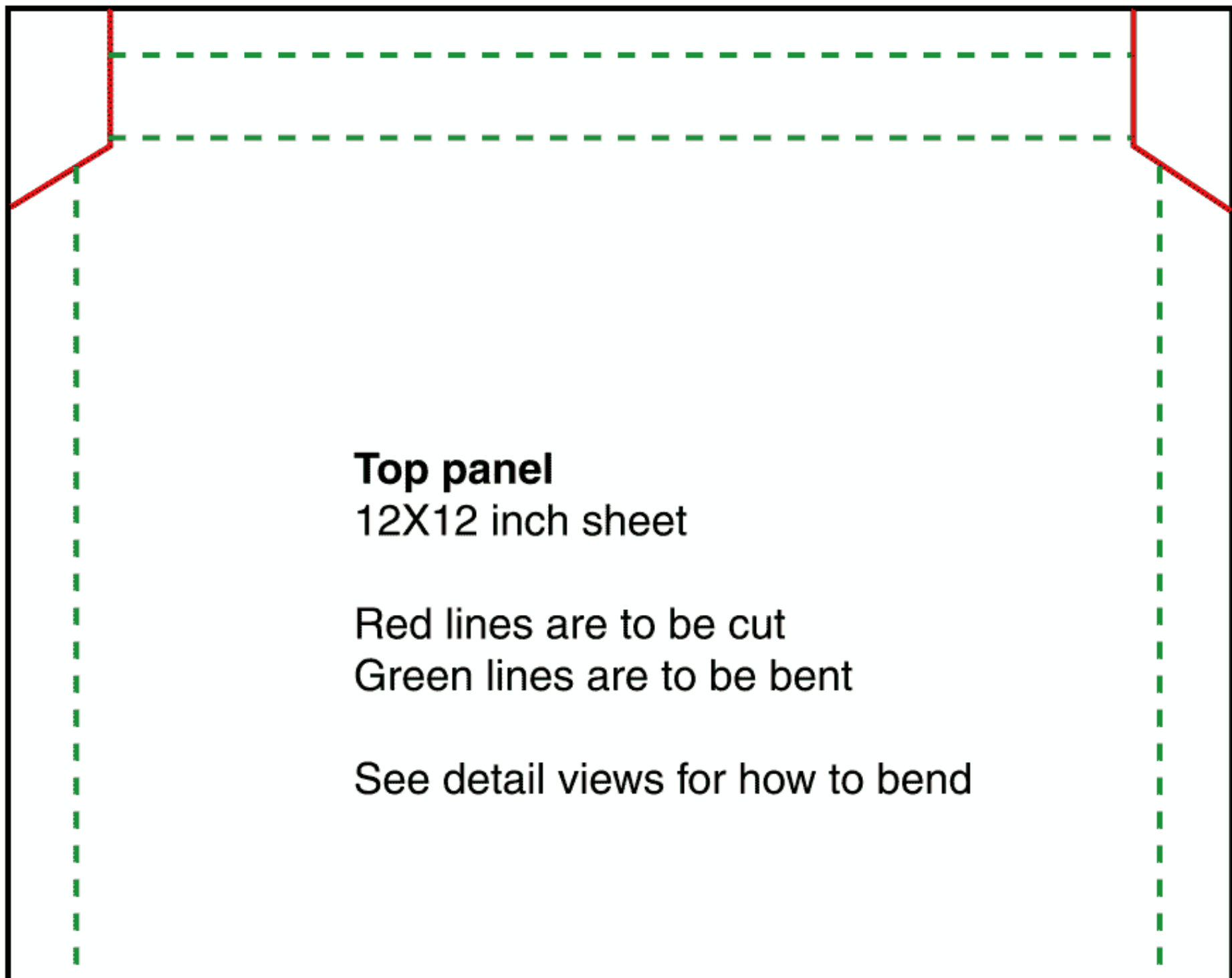
Hold a slight lateral shape



1. Start by attaching a coat hanger wire centered with equal distance hanging out each side on the top plate.
2. You should already have a pre-formed channel to put the wire into. Some light bending by tapping with a hammer should finish installing it. Don't make it too tight as it must move freely to be able to collapse the unit for storage.
3. Bend the excess on each side at a 90 degree angle and fit into side panels, bending it again at 90 degrees to fit in the notch in the middle of the side plates
4. Repeat the above steps with the bottom plate.
5. Twist the ends of the wire together and cut off any excess, leaving one or two inches sticking out. See [detail photo here](#).







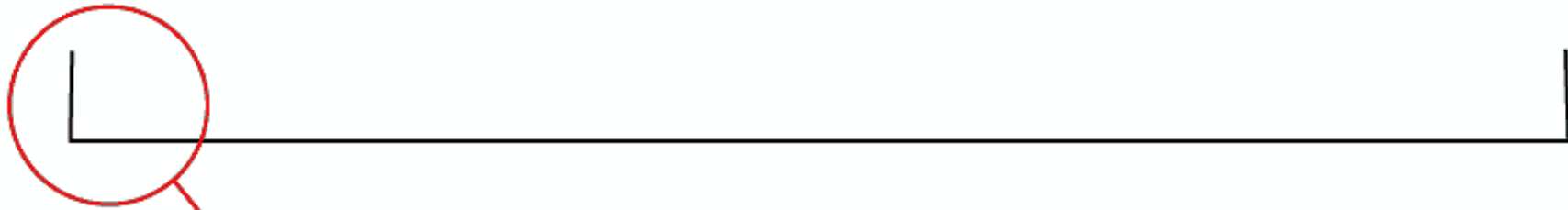
Top panel

12X12 inch sheet

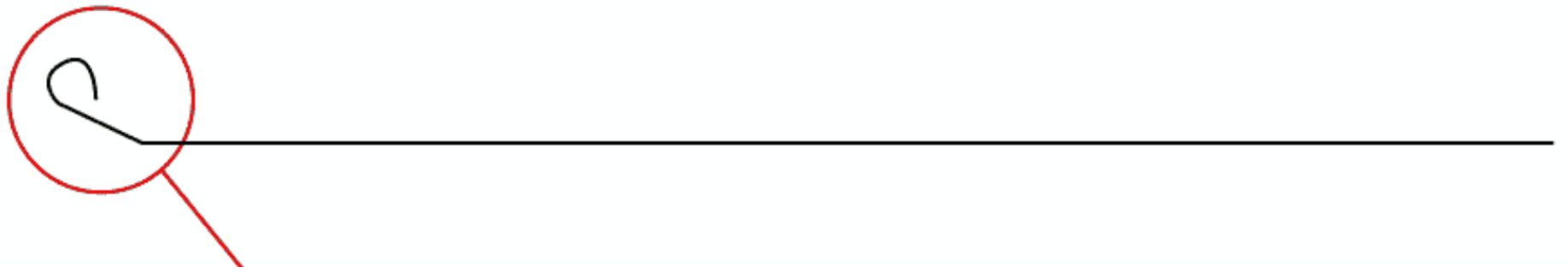
Red lines are to be cut

Green lines are to be bent

See detail views for how to bend

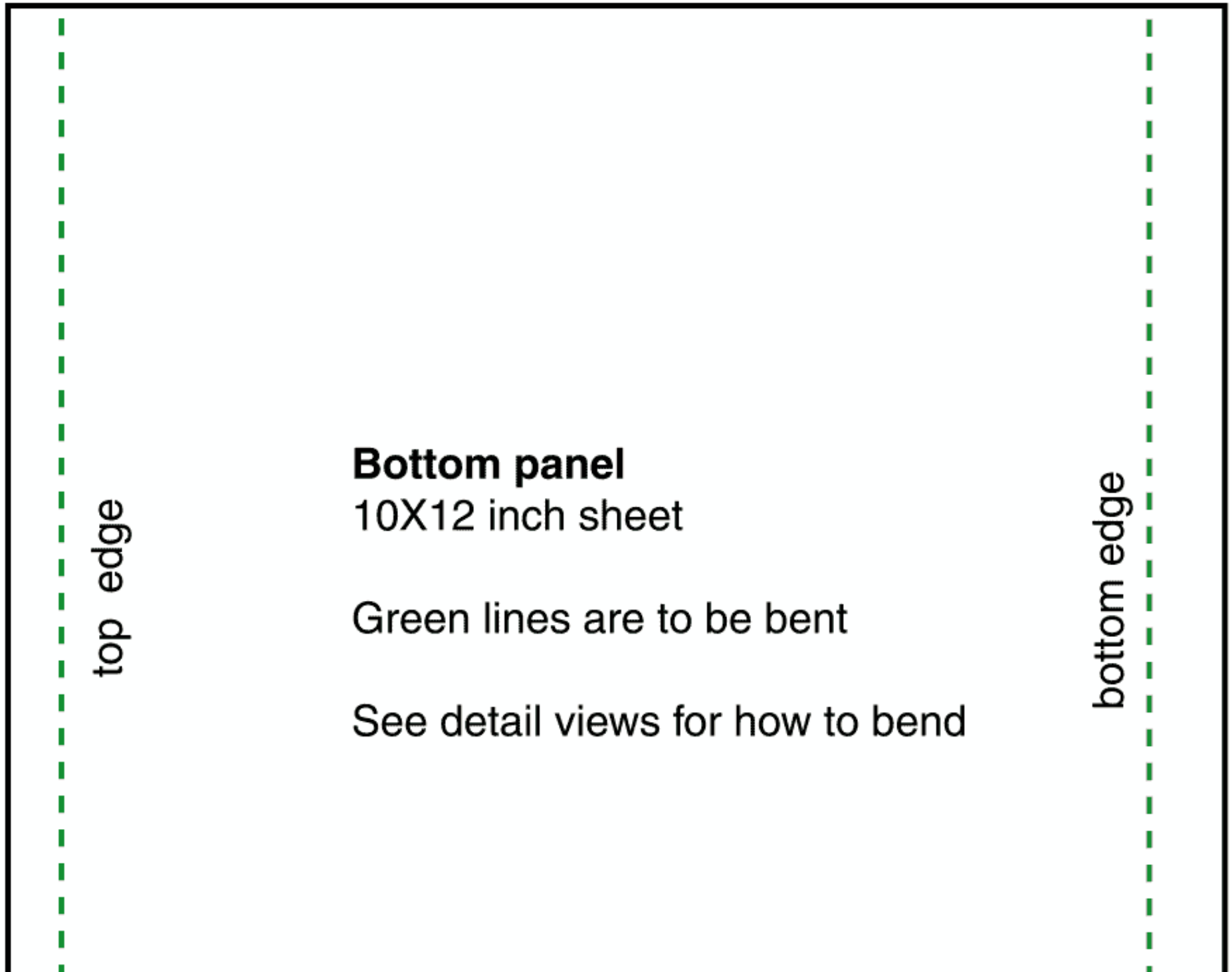


End view
Fold sides in at 90 deg. angle



Side view

Fold cut end to slight angle and prepare a roll to enclose wire frame.



Bottom panel

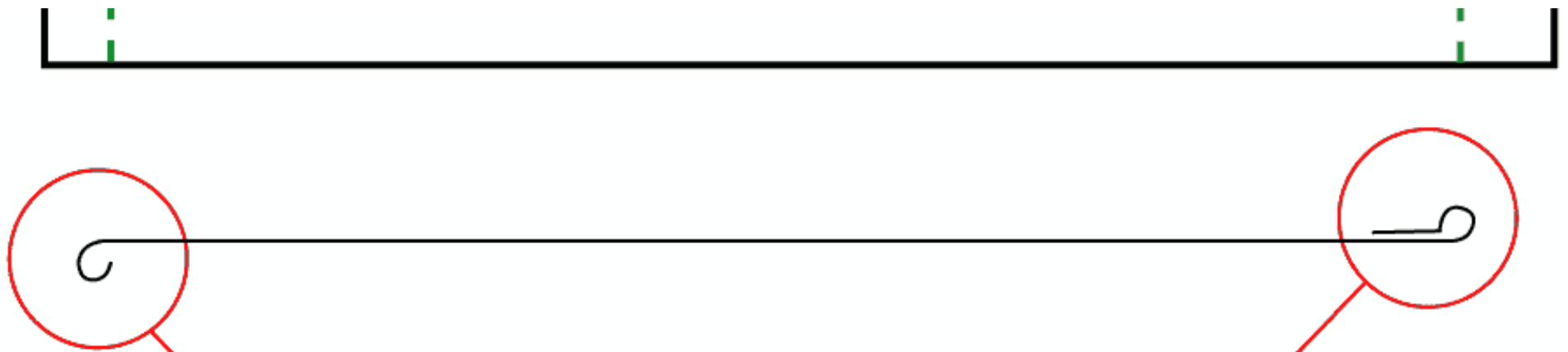
10X12 inch sheet

Green lines are to be bent

See detail views for how to bend

top edge

bottom edge

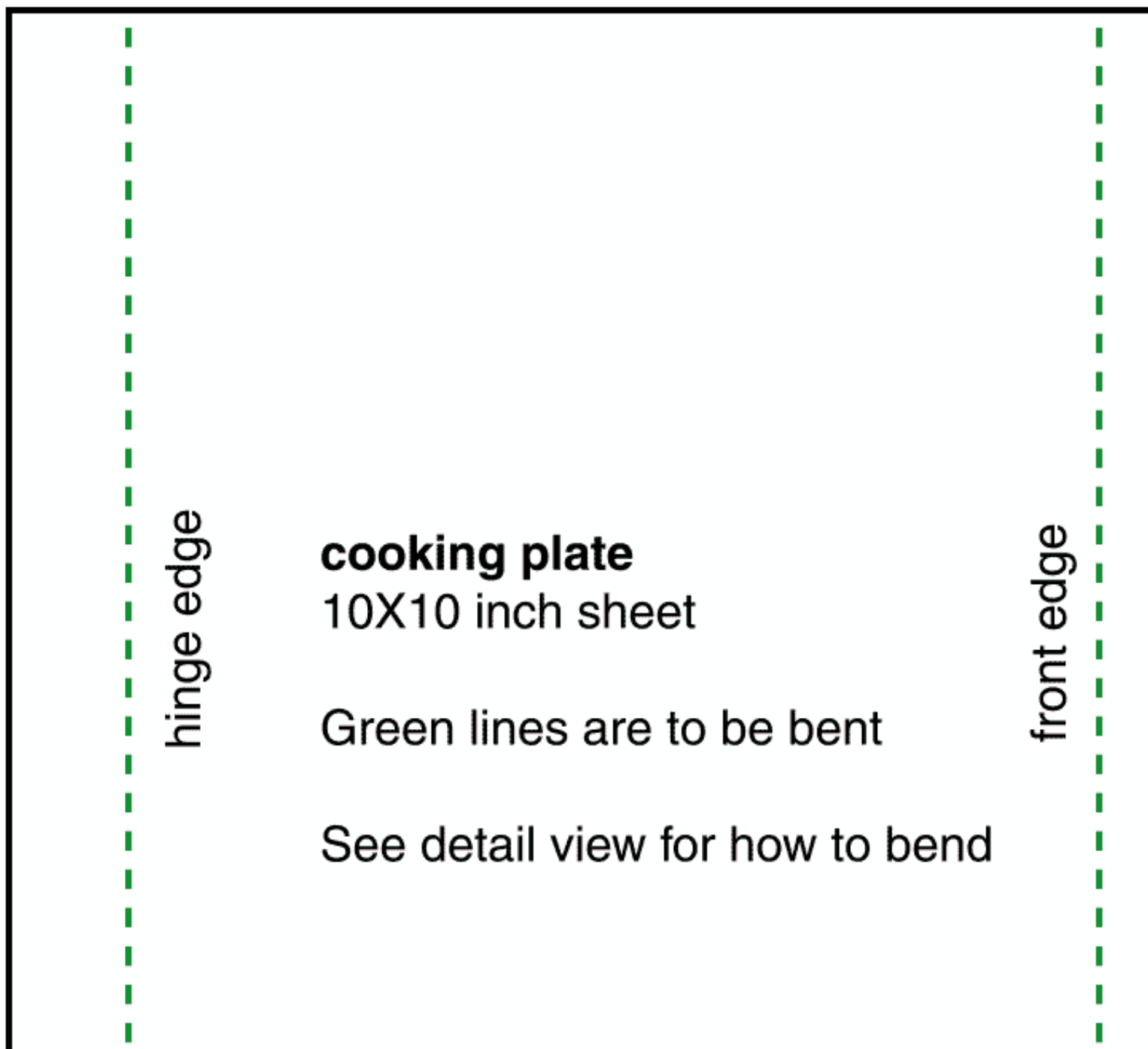


Side view

Fold ends in opposite directions

This end encloses wire frame

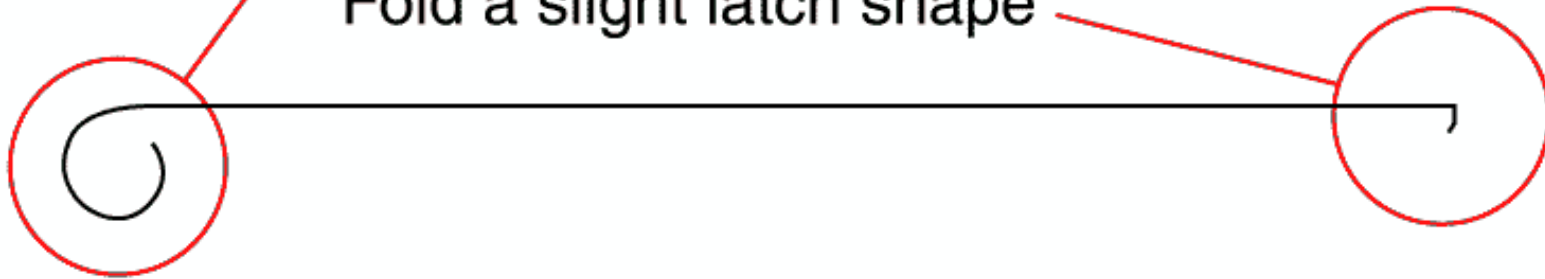
This end will act as hinge





Side view

Fold hinge large enough diameter to
enclose bottom hinge
Fold a slight latch shape



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This photo illustrates the bend where the cooking plate joins the bottom plate.

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Here is a detail view of the top cover for the reflector oven. The extra bend at the top hinge makes it easier to fold the unit up to cover the bottom plate when folded.

Note that the top cover must go outside the side plates, so it's a good idea to hold off making this bend until the wire frame has been installed. It can be done beforehand, just make sure you leave enough room.



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The left photo illustrates the hinge mechanism on the top plate that allows access to the item being baked. You can use a stick, a pot holder or a small pair of pliers to lift while baking. Food should be rotated at regular intervals to ensure even baking.

The right photo illustrates the inside of the oven.

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Here is a detail view of the wire frame linking top and bottom covers in the centre of the side plate .

It also shows the bend on the cooking plate that prevents this piece from slipping out and collapsing.