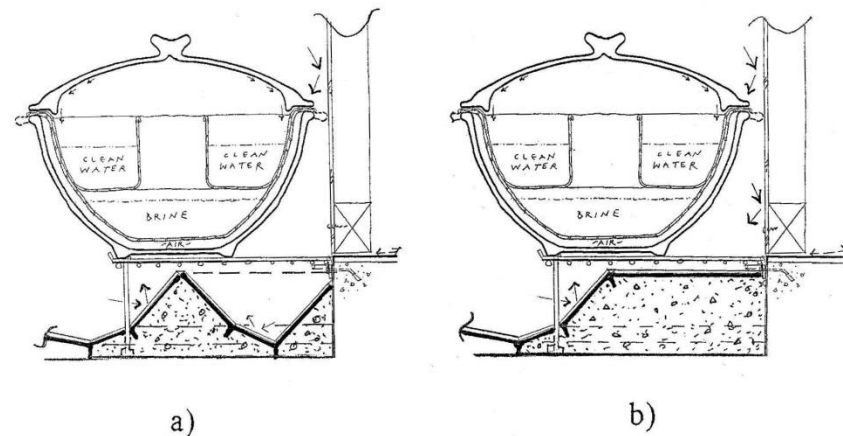
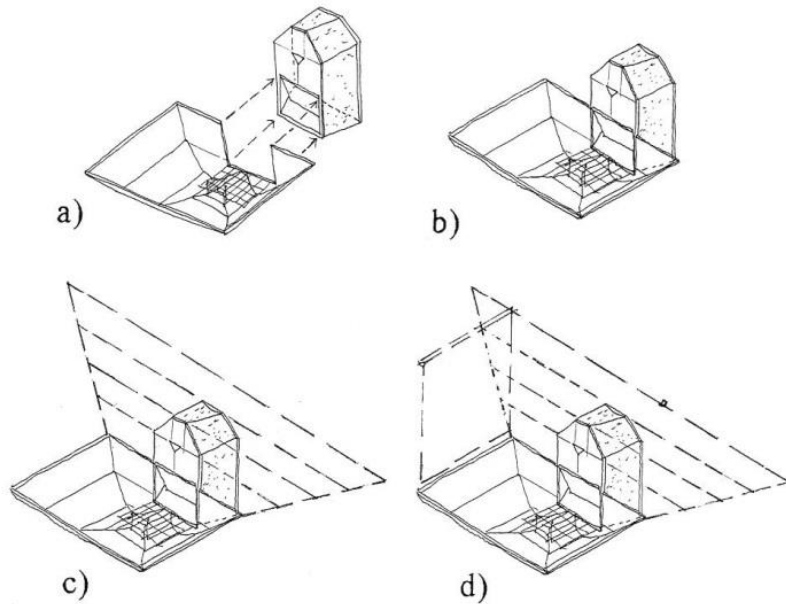


Thru-wall solar oven door sizing for cookware options



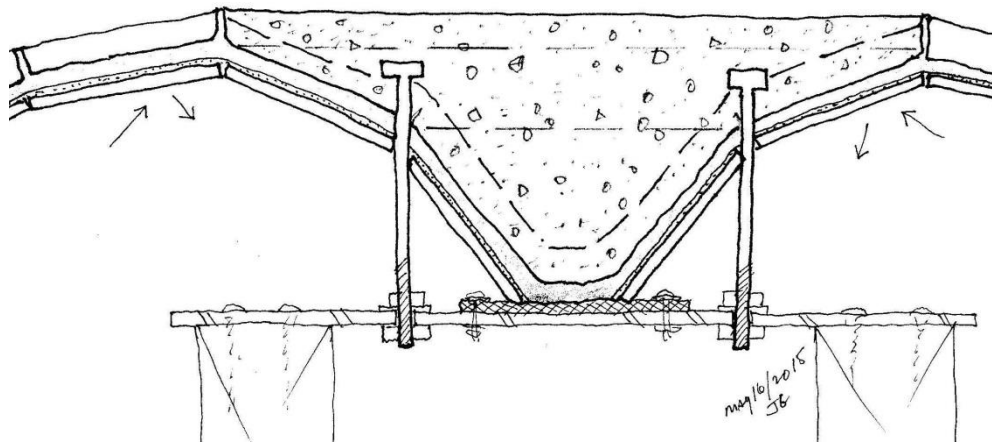
Thru-wall solar oven unglazed reflector box shape options under grill: a pyramid; b ridged

HOUSE Thru-wall solar kitchen studies
Joel H. Goodman

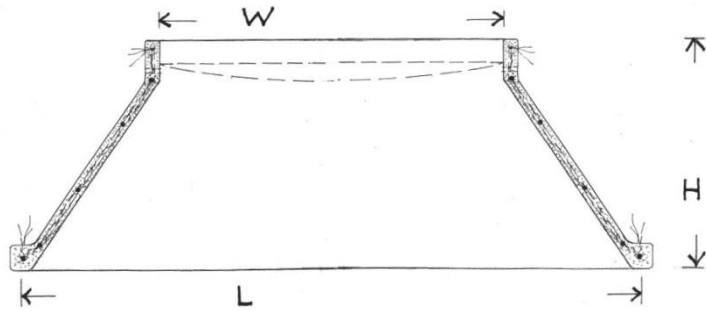


Thru-wall unglazed reflector box

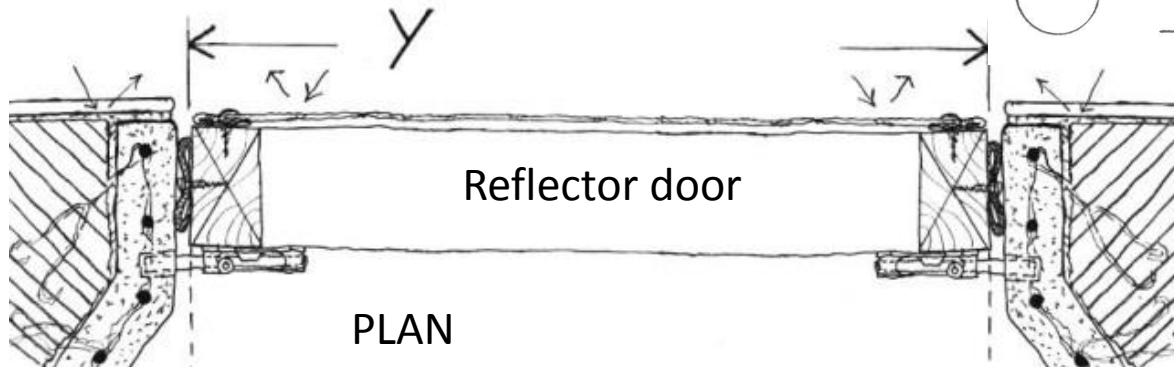
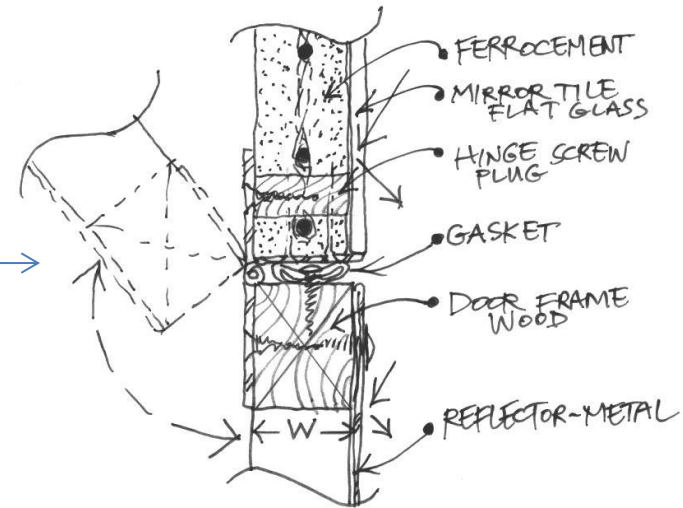
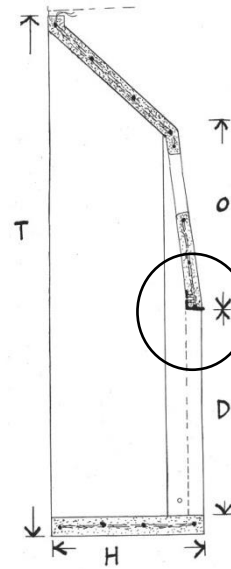
The unglazed reflector box has mirror glass segments glued to a mass produced substrate (bio-plastic, etc.). The mirror box at the site is inverted and the bolt-posts are cast into the center part of the box. After the small amount of concrete is set the mirror box is set on a masonry base and mortar and masonry are filled in under the box to perimeter masonry walls are completed.



Inverted nonimaging reflector box with cast in bolt-post.



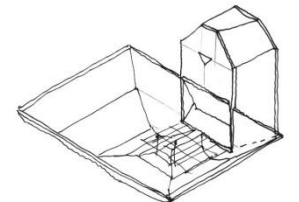
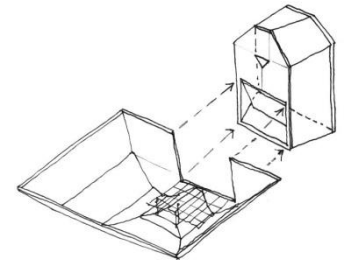
PLAN



PLAN

DETAIL AT TOP HINGED
REFLECTOR DOOR

JG
DEC 10
2014



Thru wall solar oven door (wood) ferrocement frame form for CSEB walls. Screw plugs for hinges can be replaced, and a metal strip drip extends as a ledge for the glass mirror tile above the door.

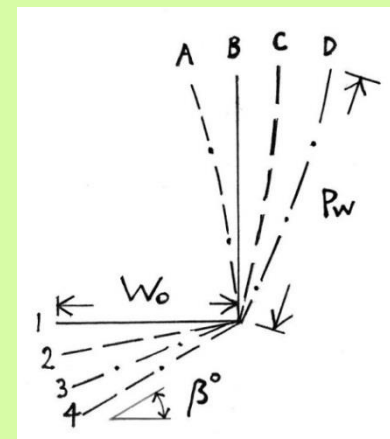
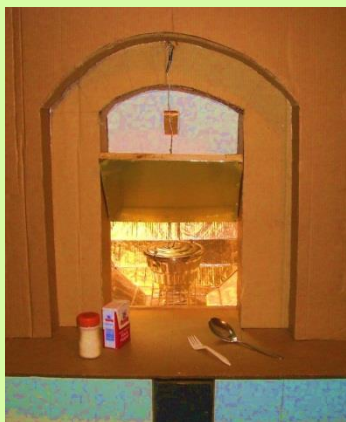
JH Goodman

Dec 11, 2014

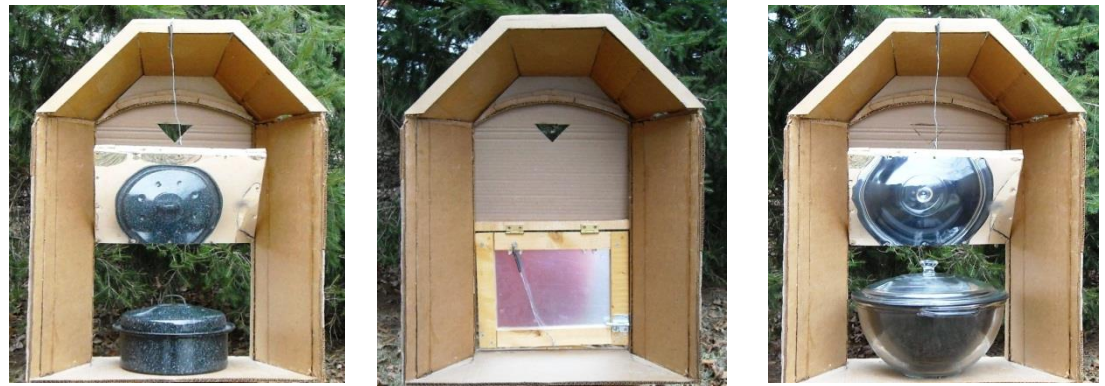
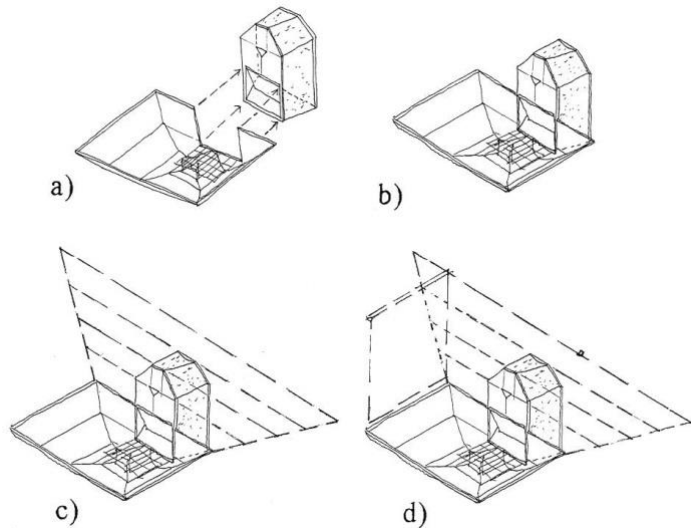




HOUSE Thru-wall solar kitchen studies



Nonimaging reflector concentrator thru-wall solar kitchen studies



Thru-wall solar cooker prefabricated parts

Two prefabricated parts that fit together are: a thru wall door frame CSEB masonry form; and an unglazed reflector box with cookware support grill. An intention is for large quantity production with bio-plastics and in-shop mirror tiling. An aim is to produce prototypes with ferrocement or other suitable prototype materials. Cookware sizes determine door clearance dimensions. A nonimaging solar concentrator may work well enough for a few cookware volumetric targets, for example, three HotPots TM in a line and two all-glass ~4"x 1m evacuated tubes. Dimension E is tall enough for upward door swing clearance. A thru-wall solar cooker has significant house plan and site design solar access factors, complicating house cluster and multi-story design.

JH Goodman Dec.18, 2014

