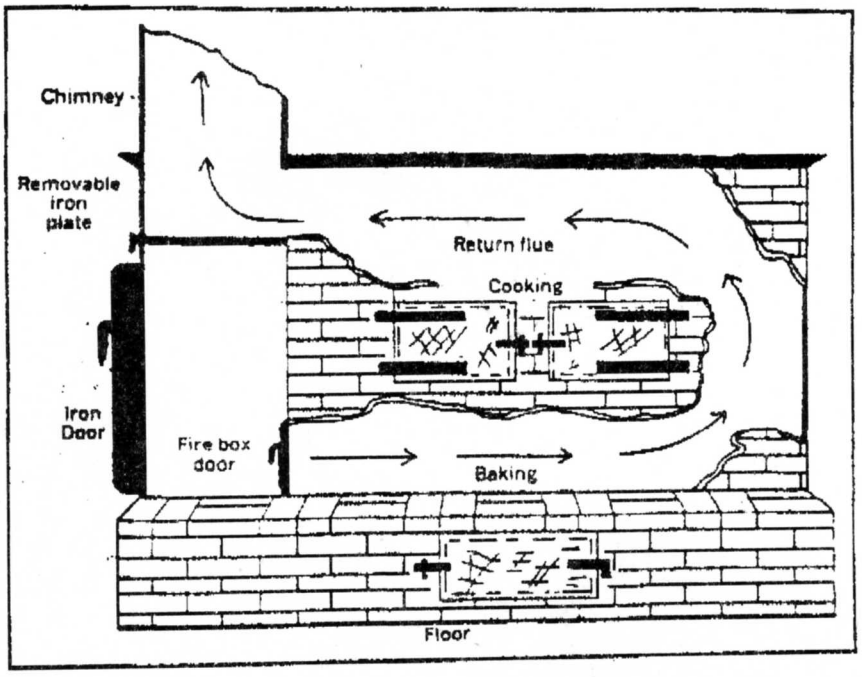
Russian stove rebuilt
by Carl Oehme-stove mason and Guy Amyot-apprentice
"Hamm" heritage housebarn
Neubergthal, Mb.

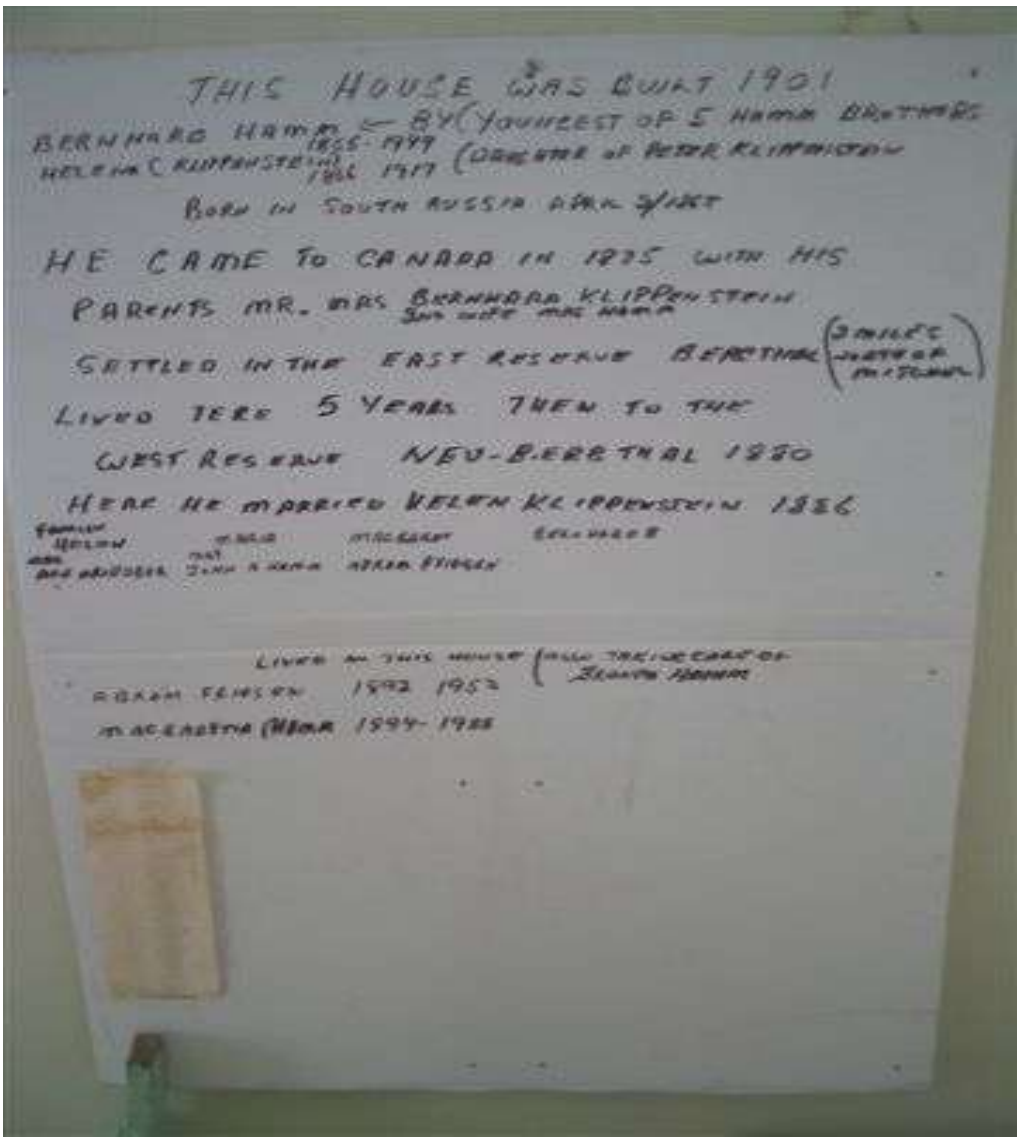
Historical: Early masonry stoves on the Canadian Prairies were commonly built by "mennonite" immigrants from Russia. The style was of the "russian or peasant" type stove sometimes reffered to as a "grass burner". It had a bakeoven situated between the firebox and upper horizontal channels. It had an inner loading door and an outer door with about a foot inbetween. Inside this area above the outer door was a simple sliding damper. Above this damper was where the gases would exit the upper channel of the heater into the chimney. I am only assuming that this was designed with the advantage of reducing smoke spillage into the kitchen, easy access for cleaning the chimney, and perhaps an area to "smoke" meats etc. Next to the front loading area of the heater(which was in the kitchen) was situated a wood burning cook stove which also vented into the same chimney. These appliances were not used during the hot prairie summer months. It was instead common to have a "summer kitchen" which was basically open but sheltered from the rain and perhaps insects.



The large brick heater in the centre of the building extended into one or two other rooms besides the kitchen. Because of the heater's size and construction, it usually kept the house warm continuously if heated up only twice a day, morning and evening.
The heater worked equally well with a variety of fuel. In Steinbach and the East Reserve of Manitoba there was no shortage of wood for fuel but in the West Reserve of Mennonite settlement, manure was used.
To prepare this, moist manure and straw were spread on the ground to a depth of about one foot. Horses were then walked over this unit until it was fairly

compact. When partly dry, after a few days, it was cut into squares with a spade and piled in such a way that the drying process could be completed. Fuel made in this manner was odorless and provided slow but adequate heat.

"Hamm" Heater: It was interesting to note that the home's construction consisted of a horse manure type of sod within the walls. Part of this "manure sod" was in direct contact with exitting gases of the stove before entering a completely surrounded chimney of burnt clay brick. The heater's outside surface had a "plaster" coating made from the same horse manure. Horse manure shows undigested bits of the grain/hay which would have given strength to the sod walls and plaster. In rebuilding the russian stove with firebrick and facebrick it was necessary to widen the sod walls opening a little. The sod wall could not be easily cut with a conventional sawsall but rather a small electric chipper was used comparing the task to chipping "soft" concrete. Our obsevations concluded that the horse manure was very strong and fire resistant.



Photos:

First course is laid out for an 8” reclaimed brick wall to support firebox floor. It's not immediately know what this area was used to store. An access door to this area was built into one side as per the original design. Close attention was given to the built in hutch (upper right in above photo)that originally touched the stove. Given that “campfire rules” now apply to the operation of the stove we still insisted that the stove not be allowed to touch any exposed wood surfaces. Hence the lay out meant moving the original stove's location slightly(1”) and decreasing the overall length so that the wood partition wall (lower right in above photo)not touch the heater.

This photo taken from the kitchen up into the existing chimney shows the “manure sod” bricks that were used. The chimney portion of the sod had a clay coating which had stood up very well. Also note the proximity of a wood cupboard to the stove and chimney. This was removed to allow the stove to be moved over and will be rebuilt.

Stove is laid up to top of firebox floor. A precast concrete slab was poured for ease of installation by the contractor who didn't have access to any castable. We therefore placed a double layer of .25” non-asbestos millboard on top of the concrete slab before placing the firebrick floor.

Another view.

Firebox walls go up!

Another view.

Additional views and from kitchen showing replica inner loading door.

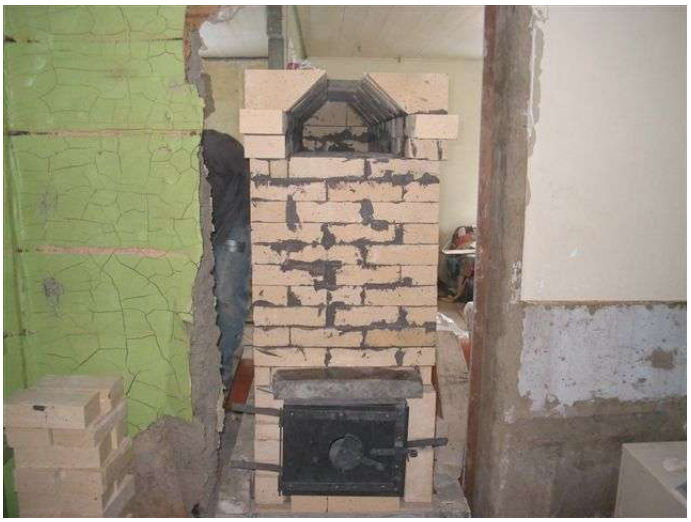
Firebox view before setting ceiling. We created a poured in place floor slope with castable since we felt the firebox being too narrow to accommodate a 45Deg. half firebrick. We did use firebrick cut at 45deg. At the far end of the firebox.
Another view from front without loading door.

View of the baking and cooking area just above the firebox. There are 3 openings to this area. One is located on one side and two on the opposite side. The ceiling of the firebox floor which is also the floor of the bakeoven was precast the day we arrived using castable. We also precast the bakeoven ceiling and a two piece cap for the heater's top. Not part of the original design but felt it usefull we installed a 2" x 2" gas slot above the firebox which passes through the bakeoven exiting the upper channel. See below. Gas slot and warming chamber is seperated to the bakeoven. A clean-out plug cut from

firebrick was installed into this area from the bakeoven side. If you look carefully you'll see the plug in the upper photo at the floor on the left side of the photo.

Mineral wool was used before installing all the precast pieces.

Precast castable lintels were made for all firebox and bakeoven doors.



We tapered the top of the upper channel to allow a more streamlined gas flow and complete combustion. The top of the heater was often used as a place to bed sick

children or infants so we wanted to ensure this area absorbed as much heat as possible.

The above shows capping slab installed and cardboard spacers used as a slip joint between the heater's core and the facing.

Original outer door being installed. It had 2 welded “handles” on either side that were mortered into the brickwork. This outer area had no other protection save for a single wyth of clay brick that was parged both inside and out.

Space between the outer door and the inner firebox loading door.

We gave a coat of mortar to the entire surface before a final coat of horse manure plaster which will be added afterwards. The above shows a view through an upper channel clean-out door.

Interesting Links:
http://www.mennoniteheritagevillage.com/tourvillage.shtml
See item 4. Chortitz Housebarn and of interest 6. Outdoor oven

http://64.233.167.104/search?q=cache:ZtvJvZKfQ7AJ:www.mennonitechurch.ca/events/winkler/tours.htm+mennonite+brick+stove&hl=en

http://64.233.167.104/search?q=cache:wl4SRL8uJfsJ:www.mhs.mb.ca/docs/transactions/3/eastreserve.shtml+mennonite+brick+stove&hl=en

http://www.mhsc.ca/index.asp?content=http://www.mhsc.ca/encyclopedia/contents/A731ME.html
See "typical russian mennonite dwelling" scrolling over half way down the page.