

Fireless Cooking

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Fireless Cookery

Fireless Cookery is not a new convenience in the art of cooking. In Germany the cooker was known by the name of a hay box. The very primitive box was lined with any cloth which happened to be convenient, filled with hay, a nest made in which the utensil with the partially cooked food was placed, and hay packed on top of the utensil. The food was allowed to remain in the box a number of hours to complete the cooking.

Our attention was drawn to the device by a United States Representative to Germany. Further experiment

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was made by the Commissary Department. The work was done at Fort Riley, Kansas by two of the instructing army cooks. The experiment was found to be very successful and practical particularly when used for cooking food for the soldiers when they were marching. Fireless Cookery for the soldiers has an additional advantage, in that it has to be conducted on a large scale. Larger amounts of food hold the heat longer and cook faster.

The average cooker has three enamel utensils which are for all purposes

air tight when covered. In preparing food for the cooker it is to be made boiling hot and left to boil for several minutes according to the materials to be cooked. In all cases the heat must fully permeate the meat or vegetables as this heat is to serve for the further cooking.

The time for cooking meat over the fire depends upon the tenderness and the amount. Cheaper cuts of meat can be made as palatable and digestible as the more expensive cuts if properly cooked. The principles of meat

cooking demand a high heat for the first few minutes and the slow cooking afterwards. In all cases the heat must penetrate to the center of the article to be cooked.

For a three pound piece of meat thirty minutes should be allowed; for vegetables and cereals all the time required is just enough to have them boiling from three to five minutes. Cereals, boiled meats, sauces, fish, soup vegetables, fruits and puddings are the foods which cook to best advantage. Such ^{articles} of food as rice dried beans, lentils and

dried fruit should be well soaked in cold water before any attempt is made to cook them.

Some advantages of fireless cookers are:—

First— the cost of fuel is lessened from four fifths to nine tenths

Second— the food is better cooked, more digestible and more nutritious

Third— the kitchen odors are obviated.

Fourth— time and labor are saved, and the kitchen kept in perfect order

Fifth— warm water can be kept in time of illness and in the summer when no fires are kept.

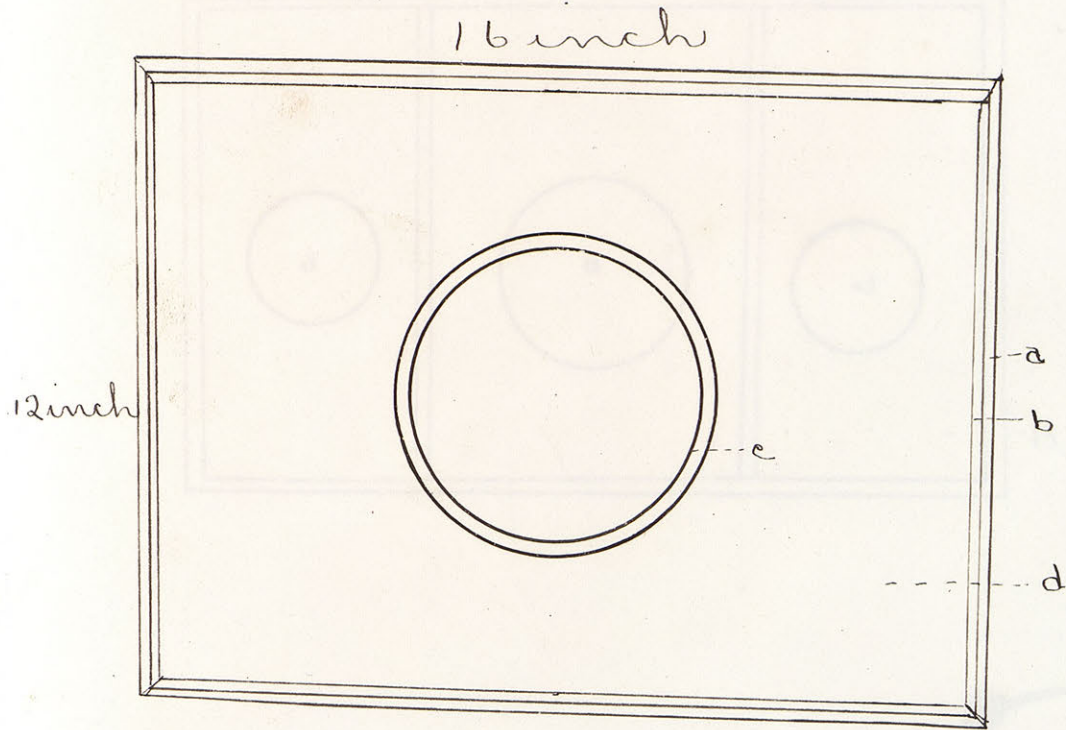
Sixth - Scorching and burning are prevented and there is no need of stirring.

Seventh - in camping and fishing expeditions the cooker can furnish a hot meal.

Eighth - usefulness in families requiring irregular meals.

Ninth - where families have to live in close rooms kitchen heat can be obviated by doing the preliminary cooking in the morning and the food cooked further during the day.

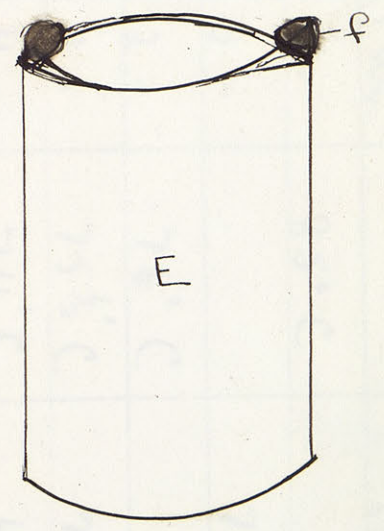
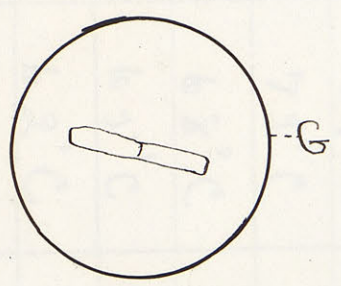
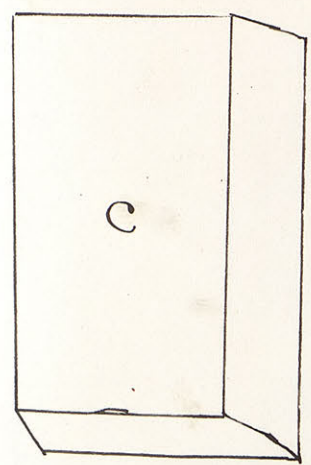
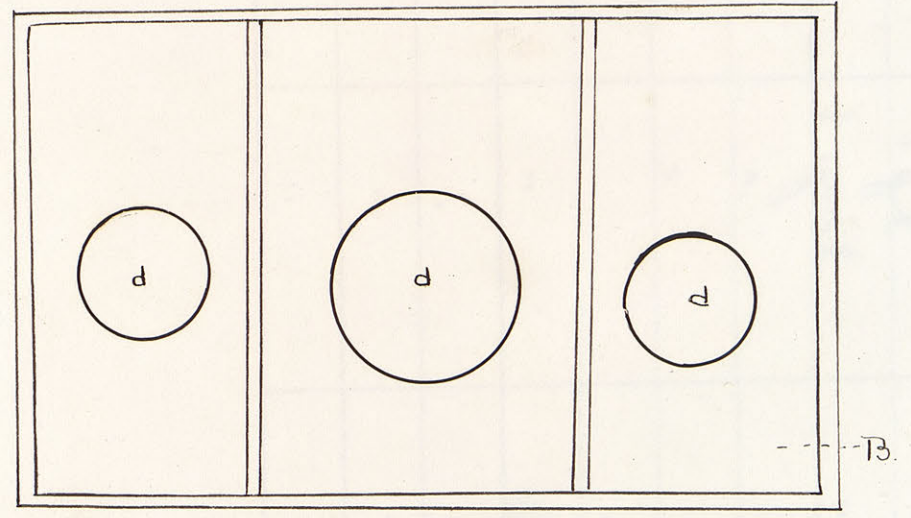
Home Made Cooker



- a - wooden box
 b - asbestos sheet
 c - space for bucket made
 of round sheet of asbestos
 d - may be filled with
 any material such as
 hay, excelsior, animal
 wool, asbestos wool or
 mineral wool.

The Cooker

36 x 15 x 17
A



- A. The Cooker
- B. Filled with Excelsior
- d. For utensil
- C. Cushion of excelsior
- E. Granite Receptacle
- F Rings to clamp on cover
- G Cover with clamp.

Material	Amount	Boiling	Temp. when put in	How far	Water taken out of animal	Water	Water	Material
"	1 gal	"	"	1 hr.	85°C	81°C		granite
"	3 qt	"	"	2 "	76°C	78°C		lime
"	1 gal	"	"	2 "	75½°C	71°C		granite
"	3 qt	"	"	3 "	74°C	63°C		lime
"	1 gal	"	"	4 "	73°C	61°C		"
"	"	"	"	5 "	68°C	60°C		"
"	"	"	"	6 "	65°C	59°C		"
"	"	"	"	7 "	62°C	57°C		"
"	"	"	"	8 "	60°C	50°C		"
"	"	"	"	9 "	57°C	48°C		"
"	"	"	"	10 "				"

Water experiments in Horse

Temp. when put in

Water taken out of animal

Water

Water

Material

Experiments in Home Made Cookery

Material	Am't.	Water	Cooked ^{Time}	Box	Time in box	Temp.	Utensil	Cooked	Remarks
Mustard	2 c	—	—	Animal	15 hr.	50°C	tin	Yes	Was not steamed
Potatoes	½ lb	2 qt	Boiled 5 min	Mineral	"	47°C	granite	"	Water no-ched
Barley	1 c	6 c	"	Asbestos	"	29°C	"	"	Soaked 2 hrs.
Sagehen	1 c	5 c	"	Mineral	"	47°C	"	"	3 hrs.
Onions	½ lb	4 c	"	Asbestos	"	32°C	tin	"	
Beets	1½ lb	2 qt	"	Animal	"	47°C	granite	"	Well soaked
Mustard	1 c	—	—	Mineral	"	20°C	"	Partially	Was not steamed
Rice Pudding	3 c	—	"	Asbestos	"	27°C	"	Yes	
Raisins	1 c	2 c	"	"	"	27°C	"	"	
Brown Bread	2 c	in 2 qt	"	Mineral	"	29°C	tin	No	Steamed
Graham Meal	1 c	2 qt	"	Animal	"	37°C	granite	Yes	
Beef	1½ lb	2 qt	"	Asbestos	"	33°C	tin	Partially	
Cabbage	½ lb	2 qt	"	Animal	"	45°C	granite	Yes	
Beans	½ lb	2 qt	"	Mineral	"	49°C	"	"	
Vegetable soup	4 qts	4 qt	"	Asbestos	"	34°C	"	"	
Navy Beans	1 c	3 c	"	"	9½ hr	31°C	"	No	Soaked over night
Lima Beans	1 c	3 c	"	Animal	"	37°C	"	Partially	"

Material	amt.	amt H ₂ O	time cooked	Boil	time in Boil	Temp.	Utensil	covered	
Chicken	2 1/2 lbs	5 c	Boiled 5 min	no salt Cokebates	14 1/2 hrs	31 °C	granite	Partially	Chicken was old
cream of wheat	2 c	2 qts	5 "	mineral	13 1/2 "	45 °C	"	yes	
cracked wheat	2 c	2 qts	25 "	"	15 "	46 °C	"	Partially	
Roasted oats	1 c	4 c	10 "	"	16 1/2 "	45 °C	"	yes	
Simmer Beans	1 c	4 c	30 "	mineral	15 "	40 °C	"	"	
Rice	1 c	4 c	15 "	Cokebates	5 "	45 °C	"	"	
Rice	1 c	4 c	30 "	mineral	10 "	34 1/2 °C	"	"	
Apricots	2 c	4 c	10 "	"	7 "	53 °C	"	"	
Prunes	2 c	4 c	10 "	mineral	7 "	38 °C	"	"	
Carpanagas	2 c	4 1/2 c	Boiling	Cokebates	11 "	33 °C	"	"	
Chicken	2 lbs	2 qts	830 m	mineral	16 "	47 °C	"	"	
Rhubarb	3 c	—	B. 5 m	"	15 "	44 °C	"	"	
Cracked wit.	2 c	7 c	30 "	"	15 "	51 °C	"	"	

Water Experiments in the Classroom

Material	Comments	ln Box	Temperature	Utensil
Water	3 qts	1 ln	83° C	granite
"	"	2 lns.	82 3/4° C	"
"	"	3 "	77° C	"
"	"	24 "	49° C	"
"	"	5 "	76° C	"
"	"	16 "	53° C	"
"	"	5 "	76° C	"
"	"	6 "	77° C	"

Food Experiments with the Cooker

Material	Unit	Water	cooked	Time	Temp.	cooked	Remarks
Roast Beef	3 1/2 lbs.	4 1/2 c	30 min	16 hrs	50°c	yes	
Potatoes	1/2 "	2 c	Boiling	1 1/2 "	77°c	"	
Roast Beef	4 "	—	Boiled 1 hr	16 "	37°c	"	
" "	3 "	2 c	" "	16 "	39°c	"	