

An Electric Fireless Cooker—Its Possibilities and High Lights

A One-Hole Fireless, No Bigger Than a Bandbox, That Cooks From a Lamp Socket

By Anne L. Pierce, Director Tribune Institute

AN ELECTRIC fireless is a highly specialized little machine, equipped to do certain things superlatively well, with no trouble and no dirt, to take up almost no space in "parlor, bedroom bath" while at work, and to step meekly into any small closet or disappear under any table or shelf when its work is done.

We have had many inquiries from women living in hotels or non-housekeeping apartments and needing to prepare a little special food for an invalid or the baby (such as perfectly prepared vegetables and cereals and broths) for such a device. And even one bachelor in a small country shack quite a bit off the main road, but with electricity available and no gas, demanded such an apparatus as the Standard.

For supplementary use it would also have its place in a small family. Do not expect it to bake or roast with the dry heat of the oven when there is no top heating element. It can bake certain things after a fashion (potatoes, for instance), but the function of this cooker is to cook superlatively well stews, casseroles, soups, beans, cereals and fresh and dried vegetables. The two last named are especially fine when cooked in this fireless. We take issue with a number of the claims and directions given in the circular material and will call attention to the superior results obtained, after experimentation, the cooker was manipulated in a certain way.

How the Cooker Is Built

The cooker was raised onto the Institute workbench to have its picture taken, the better to display the plugs, clock, etc. It is easily lifted by two handles by two persons, as it weighs about forty-five pounds. The overall height of the cooker raised four inches from the floor is twenty inches; with cover up it needs 20.5 inches, while the floor space occupied is only 13 by 13 inches.

The frame is of polished steel and the corners extend down and are turned outward, giving four very stable feet on which the cooker can easily be pushed about. The sides are of black enameled sheet steel and riveted to corners, bottom and top of the frame. The cover is made in the same way, and the strong, well made hinges have a stop which holds the open cover in nearly a vertical position, as shown in the photograph.

The six walls of the single cooking compartment are packed with a fireproof, insulating material, a piece of which was removed and tested in a gas flame, which slightly charred one surface but in no way affected the interior, showing that it would withstand any temperatures used in the cooker.

The lining is of seamless aluminum, except that the bottom is an iron casting into which the aluminum lining fits smoothly. The heat-

ing element is inclosed in the iron casting, having one machined flat surface. Good conduction is insured by bolting this smooth surface to the machined surface of the bottom of the cooker. The whole bottom of the cooker is insulated, and the leads to the heating element run through asbestos tubes.

The two white porcelain sockets set in the side and front of the box show where you "plug in," the clock connection for "high" heat going in on the right side and the 40-watt connection for "low," to maintain the heat (instead of allowing it to recede gradually on the usual fireless principle) goes in on the front. The clock cord is 4 feet long, and the one to the lamp socket 5 feet 8 inches, with a non-separable plug which screws into the lamp socket and should be replaced by a parallel-bladed plug to prevent twisting of the cord. The clock itself is 8 inches by 4 inches, with a black enameled face and a nickel finished hand.

The clamp which tightly locks the cooker is shown turned back over the pivot handle, which stands out from the side of the box when the lid is clamped down and so is easy to grasp in opening. It keeps cool and is a very good device. With the single exception of the old-fashioned screw plug all of the minor points of construction are excellent and make the use of the cooker easy and pleasant.

How 'High' and 'Low' Perform

The heating element is in two parallel parts. The low (only 40 watts), while the two together call for 600, the capacity of a lamp socket, but in the cooker tested only 550 watts were used. The lead to the "high" winding of the element goes through the clock switch, which automatically cuts off the current at the time set by the operator on the clock face. The "low" element is meant to maintain an even temperature by supplying only the amount of heat lost by radiation after the "high" is turned off. But while it retards the loss of heat it does not entirely maintain it (especially at the higher heats), as was shown by the following experiments:

An oven thermometer was placed in the well of the cooker, both plugs were inserted, and the clock set at 45 minutes. At the end of the time a temperature of 320 degrees F. was recorded, equivalent only to the lowest oven heat for baking or roasting. But it is the prolonged heating in the insulated cooker that does the work and prevents shrinkage and loss of valuable food ingredients.

In 30 minutes' time a tempera-

ture of 240 degrees was obtained and in 15 minutes 140 degrees.

To test the insulation of the box and the action of the "low" plug in maintaining temperatures established when the "high" is turned off the following tests were made:

Two quarts of water were brought to a boil, placed in the cooker and when reheated for 15 minutes on "high" had a temperature of 184 degrees. After one hour, the box running on "low," the temperature was 186 degrees, indicating that



some additional stored heat was thrown off by the heating element and bottom of cooker.

At the end of the second hour the temperature was 171 degrees, in three hours 161 degrees, and the following morning (7 p. m. to 9 a. m.) the thermometer was 142 degrees, a loss of only 19 degrees overnight.

To further check this point and show the advantage of cooking on "low," at negligible expense, rather than on receding heat with no plug in, two quarts of water was boiled and again held on "high" for 15 minutes. At the end of this time the plug was taken out and in an hour the temperature was 160 degrees, and in two hours only 135 degrees. This shows 26 degrees higher temperature cooking on "low" for one hour and 36 degrees higher at the end of two hours.

The relative efficiency of the "low" plug increases markedly as time goes on. When left overnight, both plugs out, the cooker was down to room temperature, 70 degrees. Indeed, only five or six hours' cooking is claimed on receding heat, whereas with low heat some cooking would go on almost indefinitely, as shown by the temperature of 142 degrees when left on "low" overnight.

Methods of Cooking

There are certain foods which are improved, or not harmed, by being put into cold water and heated up gradually (such as the tubers, soups and stews); there are others, such as cereals, tender leaf vegetables, roasts, etc., which are ruined by the same procedure and need to be started in hot water and "high" heat applied at first.

Again, there are vegetables and dried fruits which are at their best when steamed in as little water as possible at low temperatures. These points must be remembered in using an electric fireless cooker, which differs from the preheated stove cookers in having only one hot plate

in the bottom and in needing time to heat up after the food is placed in it.

For some foods this cooker must be preheated; for some the "high" heat must be used longer than for others. The figures given, showing the temperatures reached at different times from fifteen to forty-five minutes, with the heat at "high," will aid one in using good judgment in this matter.

Baked Potatoes

Our first test was with baked po-

tatoes, but in two hours, at a cost of 6 cents, the potatoes were baked as you would want to give them to a child.

Cranberries

Cranberries were cooked to perfection and any dried fruit would be. A quart of berries in one cupful of water were put into the cold cooker and the clock set for thirty minutes of "high" heat. At the end of two hours' cooking on receding heat, no plug in at all, the berries were perfectly cooked, plump and

washing, was preheated on the stove without any added water for five minutes, then placed in the cooker, which had been preheated for ten minutes. (It could have been put direct into the cooker preheated for twenty minutes.) After thirty-five minutes of "high" heat, the boiling point was indicated by the active steam coming from the vent. The cooker was then allowed to go on "low" for forty-five minutes.

In other words, the spinach was steamed in its own juices for 1.5



PERCHED high on the Institute kitchen workbench the Standard Fireless Cooker shows off to advantage its automatic stop clock, its "high" and "low" plugs, its two aluminum utensils and neat, compact figure

tatoes. The cooker was preheated for fifteen minutes and four medium-sized potatoes placed on a rack on the heating element. At the end of forty-five minutes of "high" heat they were just beginning to get soft, and not until after an hour's additional cooking (on maintained heat only) were they well done. Of course, this could have been hastened somewhat by using high heat for a longer period or by a longer preheating. The skins were not crisped as in an

juicy, being much better than when cooked on top of a stove, as all of the flavor and juices had been retained.

Spinach and Carrots

Spinach and carrots are two valuable vegetables that need to be carefully cooked for young children. Spinach prepared in the cooker became a choice delicacy, with flavors that we had never suspected of spinach before.

In this case the spinach, after

hours, at a cost of 4.4 cents (10-cent electricity), but every bit of color and flavor was retained. The leaves still showed their serrated edges and veining, and even the midribs were juicy and tender.

None of the vitamins value and none of the mineral salts are lost in a vegetable cooked slowly at low temperatures, covered, in this way, and it is the ideal method for preparing them both as regards flavor and nutrition. Carrots, sliced, could

Meat Stews, Broths, Vegetables and Fruits, Dried and Fresh, Are Among Its Best Works

be put into the preheated cooker in a very little hot water and similarly treated. They are ideal sources of lime and iron for old and young.

Cereals

Cereals were our next interest. Rice is always a test, and the first rice put into the cold cooker in cold water and given "high" heat for only ten minutes, according to direction, was a pasty mass. We cannot recommend this method and it is contrary to all cooking lore.

Rice really needs violent boiling in a large quantity of water to produce the ideal dry cereal with separate kernels. It is not logical to expect this under the cooking conditions found in an electric fireless. Much better results were obtained by heating the rice for twenty minutes, instead of ten, at "high" (using three cups of water to half a cup of rice) and leaving it on "low" for two and one-half hours. This rice showed the separate kernels, and if washed with cold water and restreamed would be very acceptable. Substituting milk for water will give a creamy cereal suitable for children or semi-invalids.

Corn meal mush, cream of wheat and such cereals could be especially well done in the cooker. The suggestion that when "low" heat is used for finishing the operation the time on "high," as given in the directions, should be reduced by one-half, does not seem to work out well. A period of rapid boiling at first is highly desirable, especially for cereals, and if they can be started on a stove, so much the better. If not, they certainly need at least twenty minutes of "high" heat at first.

Oatmeal Cooked Overnight

Oatmeal, another important cereal for the young, was also cooked. Two cupful of rolled oats were cooked in three cupful of water overnight. The cereal was put into boiling salted water and placed in the cooker at 7:30 p. m., with "high" heat for fifteen minutes when both plugs were pulled out. At 9 o'clock the next morning the current was put on at "high" for fifteen minutes and then on "low" for fifteen minutes more.

The oatmeal was well cooked, hot, rather thick, but could easily be thinned with warm milk or cream, or a little more water could have been added. This operation means forty-five minutes of cooking altogether with the heat on at a cost of 2.9 cents, supplemented by the all night cooking on receding heat which means some five hours at least as a total. Personally, we feel that for everything but soups, stews, etc., the preheating of the cooker gives better results. But in

this case good results were obtained by using hot water and putting the cereal into the cold cooker.

The Two-Story Kettle

The two aluminum kettles, with their tightly clamped lids and convenient broad handles on the top, hold respectively three and five quarts. Naturally, the one on top cooks much more slowly than the one on the heating unit. Consequently, food to be merely heated up, or small amounts requiring shorter cooking, should be put on top and, if possible, preheated on the element before both kettles are put in.

To find out the relative cooking ability of this upper space, the same quantity of turnips and water was placed in each and the smaller kettle placed on the bottom. The cooker was preheated for fifteen minutes, boiling water was used on the turnips, and "high" heat was used for thirty minutes, until steam was actively pouring out of the vent, indicating boiling.

After an hour on "low" heat the vegetables in the lower kettle were done, but those in the top were not. Both were replaced for another half hour, when both lots were satisfactory, showing that it took one-third longer to cook the food in the upper kettle.

We think that the space could be used to better advantage if duplex or triplicate kettles were furnished, each having contact with the heating element. These, however, could be obtained as supplementary vessels.

Conclusions

In brief, we think that as a supplementary cooker, for special purposes and conditions, this electric cooker could be most advantageously used, but many of one's preconceived ideas about cooking must be laid aside and the idea of steaming foods with a very little water for long periods be well understood. Oven or even surface cooking with gas, using high temperatures in a ventilated space, is diametrically opposed to the process of slow cooking at low temperatures, and one must experiment to get the best and most economical results.

We are inclined to think that a longer use of the "high" heat, while not necessary, gives better results and that the "low" heat does better work, except for all night work with cereals, than the receding heat. The advantages of steaming vegetables, fruits, etc., are very great, from both the dietetic and flavor and quality points of view. For supplementary cooking the cost is not great even with a 10-cent rate for electricity (0.4-cent an hour for "low" heat and 5.5 cents for "high"), and cleanliness and convenience are, of course, afforded to the last degree. No stones to heat for this cooker!

The Standard Electric Cooker No. 101.

Made by the Standard Electric Stove Company, Toledo, Ohio.

(Tested and endorsed by The Tribune Institute)

Three Leading Bouillon Cubes and a Well Known Beef Extract

Mild Stimulation and a Salty, Meaty Flavor Found Here



Who's Who in Foodville

The Plan of Work
THESE PRODUCTS HAVE BEEN SUBJECTED TO A CHEMICAL TEST AND SHOWN TO BE OF EXCELLENT QUALITY, ACCURATELY LABELED AND FREE FROM ADULTERATION. COOKING TESTS IN THE INSTITUTE LABORATORY HAVE BEEN MADE TO DETERMINE THEIR EDIBILITY AND ADAPTATION TO SPECIAL USES.

Anne L. Pierce, Director, Tribune Institute.

Typical Products Tested and Approved
Armour's Veribest Bouillon Cubes
Armour's Veribest Extract of Beef
Armour & Company, Chicago, Ill.
Oxo Bouillon Cubes
Oxo Ltd., Inc., London, England
Steero Bouillon Cubes
Schieffelin & Co., New York

THE bouillon cube is a mild stimulant, a delightful flavoring for a cup of hot water; a great convenience in making sauces and gravies in the place of stock, and as a basis for a clear consommé, to which a few vegetables may be added. They all contain about 6.4 per cent of salt, necessary, partly, for flavor and partly to preserve the meat protein of the cube, of which there is 17 per cent in Oxo; about 20 per cent in Armour's and 22 per cent in Steero. There was, also, slightly more fat and less water in the Steero (1.7 per cent of fat and 4.6 per cent of water), the other two cubes having 7 per cent of water with 1.12 per cent of fat in Armour's and only 0.83 per cent in Oxo. The prices are about the same.

The proteins in these cubes are only the stimulating extractives of the meat rather than the nourishing elements. A cup of bouillon made from these cubes is just the thing to hand to father when he comes in cold, overtired, too nervous to digest well, but hungry and needing something comforting and warming preparatory to a meal. He will come to dinner in a better state of mind and body. It is not the thing to give a growing child for luncheon, with the idea that you are giving him a nourishing soup.

There are no preservatives in these products. They are wholesome and desirable in every way provided that you know how to use them.

back on when the recipe calls for "stock" and you have none, though it is a lifesaver at such times. It is then an efficient extender of meat flavor, and in vegetable casseroles and chowders, sauces and gravies gives body and flavor. Extract of beef is the pure, rich flavor of lean beef in a concentrated form.

The product is seen to be of a higher grade than the standards demand, and has a very good flavor, but is flat, needing seasoning. It has a dark color and a strong meat taste, making it much better for gravy, soup and sauce bases than the cubes, which make a clear, amber-colored solution and will probably be preferred by some for drinking purposes.

The two ounces, for 43 cents, provide the equivalent of about sixteen cups of bouillon, though tastes will vary as to strength; while the 25-cent box of cubes gives you ten or twelve cups of bouillon at 2.5 cents apiece. These products are a decided asset in any woman's pantry, when used knowingly. A. L. P.

Chefs consider it almost as essential as salt and pepper. These cubes and extracts are a great aid to the delicatessen frequenter. A slice of roast beef can be procured and a very excellent gravy made from the extract of beef and poured over it. A little added to tomato soup is very good also.

and a plain omelet is much better with a few drops added.

Beef Cutlets and Cheese Loaf

A cheese loaf is improved by beef extract. Combine one cupful of grated cheese with one-half cupful of chopped nuts and one and one-half cupful of bread crumbs. Moisten with a well beaten egg, and add salt, pepper, onion salt and one-half tablespoonful of extract of beef dissolved in four tablespoonsful of hot water.

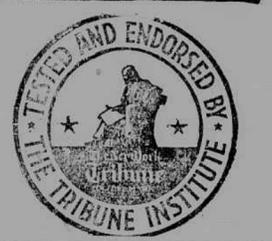
Leftover baked beans may be converted into savory cutlets in combination with extract of beef. Mash about two cupful of baked beans with one cupful of grated cheese and one-half cupful of bread crumbs seasoned with onion salt and paprika. Moisten with two tablespoonsful of extract of beef dissolved in two tablespoonsful of boiling water. Flour a baking board and form into cutlets. Dip in egg and bread crumbs and fry in deep fat.

Sauces Improved
Creamed or escalloped fish is much improved by the addition of a small amount of beef extract. And a casserole of vegetables made from a can of corn, one cupful of carrots

Recent experiments made by the Office of Home Economics of the United States Department of Agriculture show that the easy way actually saves energy. It was found in the homely everyday task of dishwashing that when a woman washed dishes on a table so low that she was obliged to bend over her energy output was thirty calories an hour. Washing dishes on a table that was a little too high for comfort required twenty-five calories an hour, while only twenty-one calories were used when the working surface was of the right height.

The Easiest Way's the Best

This statement in The Journal



A Quick, Comforting Drink or Soup—An Emergency Stock

and one cupful of cold diced potatoes, moistened with one tablespoonful of extract of beef dissolved in one cupful of hot water, is a very appetizing, substantial luncheon dish. A good sauce which is admirable for many purposes, and especially for macaroni and cheese and creamed or Delmonico potatoes, is made as follows:
Melt two tablespoonsful of butter and add the same amount of flour. Stir until well blended. Pour on one and one-half cupful of hot milk very gradually and cook until thick. After removing from the fire add one-half cupful of boiling water in which two bouillon cubes have been dissolved. A. S.

WASHINGTON MARKET
Washington & Fulton Sts., N. Y.

Beef, Lamb & Veal Our Specialties

The tenderness and fine flavor of the meats you buy depend entirely on the judgment of your butcher in selecting the best market affords. Haslob Bros. meats are noted for uniform high quality and low prices. One visit will prove to you that you can save 10% or over by trading here.

HASLOB BROTHERS
WASHINGTON MARKET
VESEY STREET SIDE

Everything the human body needs for work or play is in the whole wheat.

Shredded Wheat

Is the whole wheat, nothing added, nothing thrown away. It is only made more digestible by steam-cooking, shredding and baking.

A Perfect Ration

Adolf Sobel's PURE MEAT PRODUCTS

Cooked Ham

Ready for the table, just as you buy it. Gobel's Hams are all young, tender and thoroughly cooked. Delicious and nourishing, served cold at home or in sandwiches for school, picnic and workday lunches.

FREE TRIAL
In Your Home
World's Standard Makes
VACUUM CLEANERS
AND
WASHING MACHINES
Sole agent by the
New England, Boston, and District
Sold on Installments
Mail Orders Filled
DISBECKER & CO.
57 West 35th St.
Tel. Fitz Roy 3378

FREE TRIAL
IN YOUR OWN HOME
of the Grand Prize
EUREKA
VACUUM CLEANER
SOLD ON EASY MONTHLY PAYMENTS
Write, call or phone
Eureka Vacuum Cleaner Co.
31 WEST 43RD STREET
Telephone: Vanderbilt 7496

Gas-Top Water Heater
ELLIOTT
The Conscience of the Gas Stove
Elliott Water Heater Co. Inc.
5 WILLOWBY ST.—at GORR HALL—BROLYN
PHONE MAIN 2335