

THE PEOPLE'S INSTITUTE OF DOMESTIC SCIENCE

SCIENCE IN THE HOUSEHOLD

Intelligence and Efficiency

TODAY the head of the household demands more efficiency. The ignorant cook who puts in a dash of this, a handful of that, and does not know why she does it, will have haphazard results. Luck may be with her—and then again it may not. She may do things in a fairly satisfactory way, but without intelligence her work is not reliable. Efficiency results from the application of right principles. Practice, with a sound background of theory, makes for good results. We are undertaking to furnish every member of this mighty institute with the intelligence. In other words, this page, with its instructions, will do half of the work, to which you will add the other. Who can doubt the gratifying success that will result?

Not every page brings science to your reading table. This stands alone in a field of work that is assuming more importance every day. The People's Institute of Domestic Science is too good to ignore. It is comprehensive in scope, universal in appeal and adds intelligent practice to sound principles. Are you a member? Next week "The Family Budget" will be opened for your inspection by Winifred Harper Cooley, National President of Associated Clubs of Domestic Science.

- Among the eminent contributors to the Institute are:
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 - MRS. LEAH D. WIDTSOE, Agricultural College of Utah, Logan, Utah.
 - MRS. HARVEY W. WILEY, Housekeepers' Alliance, Washington, D. C.
 - MISS FLORENCE WILLARD, Chairman of Domestic Science Department, Washington Irving High School, New York.



A portion of the bill reads as follows: "Be it enacted that there shall be and hereby is, annually appropriated out of any money in the treasury not otherwise appropriated, to be paid as hereinafter provided, to each state and territory, for the more complete endowment and maintenance of agricultural experiment stations now established, or which may hereafter be established, the sum of \$10,000, to be applied only to paying the necessary expenses of conducting original or confirmatory researches or experiments bearing directly on home economics, including both domestic science and domestic arts, and printing and disseminating the results of said researches or experiments, having due regard for the varying conditions and needs of the respective states and territories. That bulletins shall be published as the experiment stations will publish them."

I am told that the bill was never reported out by the committee, but that it caused discussion and helped to cripple the extension bill. As much of the experimental work in home economics can be done best by co-operation with the experiment stations, this bill would provide for the best possible arrangement. It will probably be modified before adoption, and it may be that a dozen stations located throughout the country could do as much as the four dozen; but undoubtedly each locality needs its experiment station.

Then, with our college girls as future housekeepers versed in science; a well-trained home economics worker devoted her whole time to her research work, and with experimental stations providing sufficient means for such work, the application of science to the housekeeper's daily problem would be assured.

"Since the above was written, further information tends to show that a 'locality plan' is not feasible, because it would become too deeply involved in politics. But if home economics workers throughout the country would work in the interest of the establishment of a department in connection with the experiment station of each state, sufficient power might be brought to bear to pass the bill at the next session of congress—E. A. H.

districts where there is no gas the fireless cooker has proved a boon to housekeepers. The principles upon which its efficiency depends are that the observation of heat once acquired may be retained through insulation, and that many foods may be cooked at a temperature below the boiling point. The Norwegians, as early as 1861, used the cook box, and later the Germans used their feather beds. In this country many insulating materials have been used, but by measuring accurately the temperature of the same quantity of starch solution packed in hay, excelsior, sawdust, newspaper, asbestos, hair and mineral wool, it was found that mineral wool conserved the most heat. The minimum mass for satisfactory cooking was also determined, and finally the question of economy in its use was considered and experimented upon. At the time this work was done it proved economical of fuel, time and energy only when used for those processes which require long, slow cooking. Now, with the many improvements, such as a cover to draw down quickly over the food while it is still boiling hot, or the introduction of hot iron plates into the cooker, it has been made even more economical. This information would be of interest to the housekeeper.

Again, in this age of scientific management, it seems to me that the economic side of a problem is of as much importance as the scientific. Louis F. Brandeis, in his work with the railroads, and Mr. and Mrs. Gilbrith, in their work with the bricklayers, have shown us that in these days of "intensive business" it is necessary to measure small economies accurately and scientifically in order to produce efficiency. It will avail little to the housekeeper to have a problem solved scientifically if its cost in time or in money is prohibitive. Let me cite an example: The time-honored coal range, which has been the first essential in so many households, is probably doomed to banishment as soon as an equally efficient and economical method can be devised to accomplish the same work with less expenditure of energy. The fireless cooker is but a step in that direction, and it is not inconceivable that central kitchens or bakeries may do the heavy part of the cooking more cheaply than it can be done in the home. This would never mean that those methods of cooking which are now considered accessory might be so well developed that they would become sufficient. In the hope of proving such an accessory method practical, some experimental work has been done with the electrical range.

In the intermountain west, where mountain streams are numerous and their power is easily converted into electricity, it would seem practical to cook by electricity. The housekeeper needs information not only in regard to the first cost of the equipment, but also in regard to the cost of running it. At present there seems to be but one range on the market which is at all practicable for household use, and this has all the objectionable features which were attached to the first gas stoves manufactured, such as the low, back-breaking oven, etc. This electric range, with its oven, four disks, broiler and utensils, costs \$110 plus the freight. That there is economy in using the utensils which fit the disks may be seen from the fact that it costs \$2,000 more to boil one quart of water in an ordinary aluminum teakettle than in a teakettle made to fit the disk closely. The cost of running

THE caption, "Only a Housekeeper," is being relegated to the department of back numbers. This important worker in the economic scheme has by merit, and an insistence on recognition for work well done brought the thoughts of prominent men and women to bear on the all-important subject of housekeeping and homekeeping.

The establishment of departments in the colleges recognizing Domestic Arts and Sciences proves the importance of the housekeeper's demands, and as a result we are receiving better and more intelligent work in the home.

Science has taken its place in the home and is voicing principles of which our grandmothers never dreamed, but which are important contributory factors to health, happiness and efficient work.

Do you care to know what application can be made of science in solving the daily problems of the housekeeper? Let Miss Huntington, rich in experience, thoroughly informed as to her subject and eager to improve the housekeeper's work, tell you of a few salient facts that are surprising but convincing, and that will undoubtedly alter your point of view. Read and learn.

By Ellen A. Huntington

HOME economics workers of the "advance guard" have always considered the housekeeper a part and parcel of the problem in establishing home economics on a sound educational basis, but there has been little time or energy to spare for a prolonged consideration of her daily problems. Now that the educational side of home economics is finally established and well developed, it would seem as if the time were ripe for rendering assistance to the housekeeper. Therefore, the application of science to the housekeeper's daily problems will probably be attained, first, through the education of future housekeepers in science, and, secondly, through investigational work in connection with the home economics departments in our colleges.

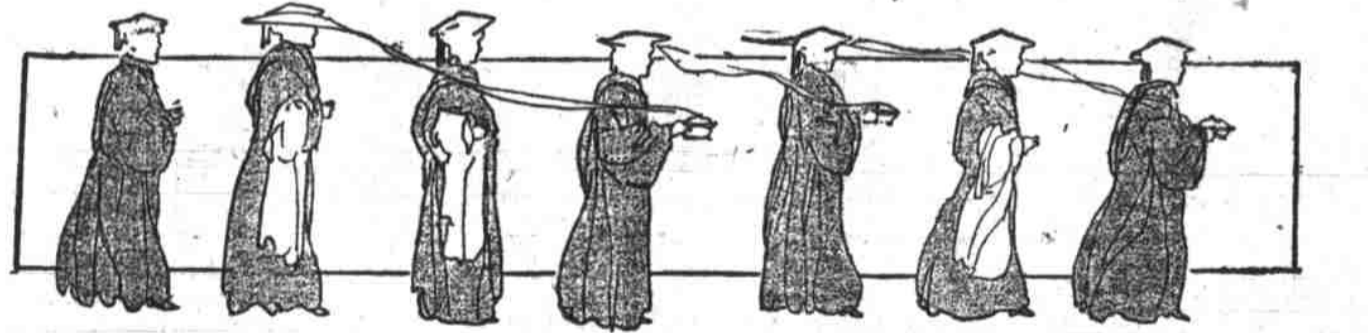
is eager and ready to include eugenics; the economist has always been in this practical profession, and it would not seem strange to see the mathematician join it soon. Thus the application of science to daily living is an established fact for the college girls who will be a portion of the housekeepers of the future.

But the assistance which can be rendered housekeepers through investigational work seems somewhat more difficult to accomplish at present, because it necessitates a worker and simple means to do the work. The worker must have had sufficient and thorough grounding in science in order to undertake the problem, and there are few women in the field at present who are thus well trained and who are not in demand for teaching. Those who are teaching and attempting to carry on experimental work will appreciate the



Educators have labored and finally converted others to the belief that there is as much mental discipline to be obtained from the practical application of science to problems in home economics as there is to be obtained from Latin or pure physics. There never has been any question in the west but that the education of woman for her position in the home or for an occupation stood in as dignified a position as the education of the boy for his position as engineer, farmer, teacher or physician. As a result it is observed that although western education has had a comparatively short period of existence, the education of the future housekeeper in science is well provided for. The chemist teaches weighing in quantitative analysis by determining the moisture content in food and accurate methods of analysis through the analysis of food; and, according to the newer methods of teaching organic chemistry, he ignores many of the compounds and derivatives to the advantage of the hydrocarbons and carbohydrates; the botanist includes a study of plants used as food, and often digresses enough to allow a consideration of the textile fibers; the zoologist

truth of the saying that half a man in experimental work means a quarter of a man in the results obtained, and a quarter of a man means no man at all. I believe it is largely due to the fact that women have had only "quarter time" which has brought down upon them the criticism that women are inclined to dabble in experimental work. It reminds one of the occasion when one woman went with five men to hold a farmers' institute. The one woman did all the work in the women's sessions, and at its close one of the men, tired and weary, said, "Yes, it is hard to carry a meeting when there are only two speakers; three make it much easier!" Therefore, the teacher of home economics finds it difficult to "squeeze in" experimental work with her teaching, and the time of the housekeeper is so broken that she, although she may be well trained in science, would find herself only a quarter of a man, so far as results were concerned. Further, could not the information be made available for all, and should there not be a clearing house for such practical information? For example, in our western country



Care of the Refrigerator

TO KEEP a refrigerator in a good condition, it is necessary to clean it thoroughly once a week, and to give it a little cleaning each day. The first essential to daily care is in regard to keeping of food in the refrigerator. This should not be kept until it is spoiled. Care must also be taken in keeping the food chambers dry and clean. When anything is spilled on the shelves, take care that it is wiped up thoroughly and immediately. In country towns, where there is no sewerage system, the refrigerator empties into a pan. This should be emptied every day, or oftener if need be. The ice and all of the food should be removed. Then all of the shelves should be taken out and washed with hot water and soap, then scalded. The inside of the refrigerator should be thoroughly cleaned upon its temperature. The larger the amount of ice the lower the temperature, and therefore the greater the efficiency. If the amount of ice is very small, there will be such a high temperature that the food will spoil readily, so it is advisable to buy as large a piece as possible, and to always keep the supply sufficient to insure a low temperature. If paper is wrapped about the ice when it is put in the refrigerator it will not melt so readily. If the ice melts low before the ice melts, open the doors of the chest and keep them open until the fresh supply of ice is put in.

GRACE M. VIALI.

MENUS AND RECIPES FOR A WEEK FROM AN EXPERT IN COOKERY

This department will be in charge of a different instructor every month. The plan will give the housewife the benefit of wide and varied experience, and will present topics of interest to all.

Conducted by Mrs. A. S. Mercure

THESE menus are planned for the average family in moderate circumstances, with a view of giving a wholesome variety of reasonable foods, simply cooked. The luncheons are varied by the introduction of various breads and cakes, any one of which is well suited to serve with afternoon tea. The breakfast menus may be enlarged by the addition of fruit and potatoes; but at this season new potatoes are so high, and old potatoes so poor, that they add materially to the expense of the table, without adding greatly to its food value. The menus are merely a suggestion to the housekeeper, who may add or substitute such dishes as she cares for.

MONDAY
BREAKFAST: Cereal, Bacon with Catsup, Graham Muffins, Coffee.
LUNCHEON: Individual Meat Pies (Veal), Rhubarb Tart, Tea.
DINNER: Cream of Green Pea Soup, Roast Beef, Asparagus Salad, Cakes with Custard, Coffee.

TUESDAY
BREAKFAST: Cereal, Poached Eggs on Toast, Marmalade, Coffee.
LUNCHEON: Spanish Toast, Nut Brown Bread, Tea.
DINNER: Veal Potpie, Clear Soup, Edible Potatoes, Cottage Pudding, Peas, Strawberry Sauce, Coffee.

WEDNESDAY
BREAKFAST: Cereal, Bacon with Catsup, Coffee.
LUNCHEON: Bread and Cheese, Rice Pudding in Cups with Cream, Tea.
DINNER: Vegetable Soup, Braised Veal, Stuffed Baked Potatoes, String Beans, Strawberries, Coffee.

THURSDAY
BREAKFAST: Cereal, Coffee.
LUNCHEON: Curried Eggs, Sugared Strips, Toast, Tea.
DINNER: Tomato Soup, Braised Tongue, Greens, Mashed Potatoes, Creamed Cabbage, Rhubarb Pie, Coffee.

FRIDAY
BREAKFAST: Cereal, Scrambled Eggs with Dried Beef, Popovers, Coffee.
LUNCHEON: Cold Sliced Tongue, Potato Cakes, Tea.
DINNER: Creamed New Potatoes, Cucumbers, Rice Pudding, Coffee.

SATURDAY
BREAKFAST: Cereal, Creamed Tongue on Toast, Coffee.
LUNCHEON: Bread and Cheese, Rice Pudding in Cups with Cream, Tea.
DINNER: Vegetable Soup, Braised Veal, Stuffed Baked Potatoes, String Beans, Strawberries, Coffee.

SUNDAY
BREAKFAST: Fruit, Creamed Potatoes, Coffee.
DINNER: Chicken en Casserole, with Onions, Peas, Celery, Carrots, Watercress, Asparagus Salad, Potatoes, Coffee Parfait, Coffee.
SUPPER: Creamed Chicken in Green Peppers, Hot Biscuits, White Nut Cake, Egg Salad, Tea.

The Hanoverian steaks for Monday's dinner are little hamburger steaks, braised and well seasoned. Over them is poured at serving time the following sauce: Brown in 1 tablespoon of butter ½ cup of finely chopped onion and cook 5 minutes. Add 4 tomatoes, cut in pieces, or 1 cup of canned tomato. Season with salt and pepper and add ½ teaspoon of sugar. Cook for 10 minutes.

The nut brown bread given for Tuesday's luncheon is a delicious adjunct to the 5 o'clock tea, and is quite rich enough to be used in place of cake. It slices very thin and may be made into sandwiches with cream cheese. To make it, use 2 cups of sour milk, ½ cup of molasses in which has been dissolved 1 large teaspoon of soda, ½ cup of sugar, 3 cups of whole wheat flour, 1 teaspoon salt. Mix thoroughly and add

1 cup of walnut meats cut in small pieces, but not chopped, over which has been sprinkled 1 tablespoon of sifted flour. Pour into a bread pan and bake in a slow oven for 1 hour.

When making the cottage pudding for Tuesday's dinner, bake in a square loaf, and such part as is not used at that meal cut in thick slices for the next day's luncheon and pour over a cornstarch custard.

The sugared strips for Thursday's luncheon are made when making the rhubarb pie for dinner. Roll out the left-over paste, cut in two even pieces, spread one with jam, lay the other strip over, sprinkle with granulated sugar, cut in finger lengths and brown in a hot oven. The sugar will melt and caramelize. These are also nice with afternoon tea.

The tongue is parboiled and skinned, then rolled and braised. Serve with a brown gravy and greens.

For the cinnamon sponge, bake an ordinary 1-egg cake in a shallow pan, adding before it goes into the oven, ¼ teaspoon of salt and 1 teaspoon of cinnamon. Cut into squares and serve hot.

Friday's rice pudding reappears for Saturday's luncheon, having been moistened in custard cups, turned out and served with flavored and sweetened whipped cream.

Chicken en casserole. Have ready,

1 cup of very strong, black coffee and ¼ teaspoon of vanilla. Put in a covered mold, pack in ice and salt and let stand for 4 hours.

White nut cake. Cream together 1-½ cup of butter, 1 cup of sugar. Add ½ cup of sweet milk, 2 cups of flour, 2 teaspoons of baking powder. Beat thoroughly, then add 1 cup of walnut meats cut in small pieces and dusted with 1 tablespoon of flour, and at the last fold in the stiffly beaten whites of 3 eggs. Bake in a square pan in a slow oven for 1 hour. Cover with boiled icing and decorate with halves of walnut meats.

Risotto. Parboil for 10 minutes 1 cup of rice. Drain, blanch with water and let drain again. Put 2 tablespoons of butter in a frying pan, turn in the rice, add 2 tablespoons of chopped onion, 1 cup of thick tomatoes, ¼ teaspoon of salt, a little paprika and ½ cup of water. Cover and let cook slowly until the rice is tender and the water absorbed. Take up on a hot serving dish, sprinkle over ½ cup of grated cheese, stir with fork and serve very hot.

Curried eggs. Hard boil 3 eggs. Make a white sauce of 1 tablespoon of butter, 1 cup of milk. Stir till thick and smooth, add ¼ teaspoon of salt and ½ teaspoon of curry powder. Cut the eggs in eighths and add to the sauce and pour over slices of toast.

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