THE NEW HOUSEKEEPING

EFFICIENCY STUDIES IN HOME MANAGEMENT

CHRISTINE FREDERICK

THE NEW HOUSEKEEPING

Mrs. Frederick in Her Efficiency Experiment Kitchen, "Applecroft," Greenlawn, L. I.

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Efficiency Studies in Home Management

BY

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IN MEMORIAM

To

MY MOTHER AND FATHER

WHOSE HIGH SPIRIT OF HOUSEKEEPING AND HOME-MAKING HAS EVER BEEN MY STIMULATION AND IDEAL

PREFACE

A moderate income, two babies, and constant demands on my time, was the situation that faced me several years ago.

I liked housework, and was especially fond of cooking; but the deadening point about the whole situation was that I never seemed to finish my work, never seemed to "get anywhere," and that I almost never had any leisure time to myself.

I wanted to read a bit, or write out some ideas I had been thinking about, or take a half hour for personal grooming. If I devoted my day to cooking, I was appalled later at the confusion and dirt I had neglected. If I specialized on cleaning, our meals were hurried and ill-prepared. If I tried to do justice to both cleaning and preparing of meals, I quite certainly neglected the babies and myself.

My husband came home only to find me "all

tired out," with no energy left to play over a song, or listen to a thoughtful article. I was constantly struggling to obtain a little "higher life" for my individuality and independence; and on the other hand I was forced to give up this individuality to my babies and drudgifying housework.

About this time I became acquainted, through my husband's interests, with several men in close touch with the new movement of industrial efficiency. From them I learned what the new science of work was accomplishing for the office, the shop, the factory. At first it did not occur to me that methods which were applicable to organized industries, like shoe factories, and iron foundries, could also be applied to my group of very unorganized industries — the home.

Yet the more I studied it, the more possible it seemed, and I determined to try it. For once I found a use for some of the college training I had despaired of ever putting into practice. I applied to the task of bringing the science of efficiency into the home, the same detailed

analysis that I had applied many a time in "Zoölogy A." or "Physics B."

I confess that it was discouraging at first, due to the distractions and disturbed routines necessary in a home where there are small children. But gradually definite results began to come — the most definite result and the most valuable benefit being the development of an efficiency attitude of mind. Once this attitude became thoroughly organized all the household problems, large and small, became invested with entirely new interests and new possibilities. Instead of becoming something upon which to slave, they became objects of keen mental interest — quite the same, I am now sure after investigation, as the tasks of the business and industrial world which men tackle with zest and results.

I put out this book, therefore, with a deeply earnest hope and belief that the beginnings made in the application of efficiency science to the household (however modest and inadequate) may yet assist in cutting from women the most dreary shackles of which they have ever complained.

The many letters I have received from American housewives in response to the series of four articles on the subject appearing in the *Ladies' Home Journal* September-December, 1912, indicate definitely, and even pathetically, that conditions are sadly in need of remedy, and that in presenting this book I may entertain some hope of solving them.

CHRISTINE FREDERICK.

"*Applecroft,*"
Greenlawn, L. I., March, 1913.

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THE NEW HOUSEKEEPING

CHAPTER ONE

EFFICIENCY AND THE NEW HOUSE-KEEPING

I was sitting by the library table, mending, while my husband and a business friend were talking, one evening about a year ago. I heard them use several new words and phrases so often that I stopped to listen.

"Efficiency," I heard our caller say a dozen times; "standard practice," "motion study," and "scientific management," he repeated over and over again. The words suggested interesting things, and as I listened I grew absorbed and amazed.

"What are you men talking about?" I interrupted. "I can't help being interested. Won't you please tell me what 'efficiency' is, Mr. Watson? What were you saying about bricklaying?"

"Your husband and I were just discussing this

new idea developed in business, called 'efficiency,' or 'scientific management'," Mr. Watson replied. "A group of men, Emerson and Taylor among others, have come to be known in the business and manufacturing world as 'efficiency engineers.' These men are able to go into a shop or factory, watch the men at work, make observations and studies of motions, and from these observations show where waste and false movements occur and why the men lose time. Then they go to work to build up the 'efficiency' of that shop, so that the men do more work in less time, with less waste and greater output or gain to the owners, while the workers have shorter hours, higher pay, and better working conditions."

"Just how do they find out what is wrong?" I asked, laying my sewing on the table, and listening eagerly, "and how do they actually increase this 'efficiency'?"

"Well, for instance," answered Mr. Watson, "this is how they improved the method of laying bricks: Formerly a workman stood before a wall, and when he wanted to lay a brick he had

to stoop, pick a brick weighing four and a half pounds from a mixed pile at his feet, and carry it to the wall. Suppose he weighed one hundred and eighty pounds; that worker would have to lower his one hundred and eighty pounds four feet every time he picked up each of the two thousand bricks he laid in a day! Now an efficiency expert, after watching bricklayers at work, devised a simple little table which holds the bricks in an orderly pile at the workman's side. They are brought to him in orderly piles, proper side up. Because he doesn't need to stoop or sort, the same man who formerly could lay only one hundred and twenty bricks an hour can now lay three hundred and fifty bricks, and he uses only five motions, where formerly it required eighteen."

"That sounds like a fairy tale," I laughed skeptically. "What else wonderful can they do with this magic wand of 'efficiency'?"

"It does sound like magic," Mr. Watson replied, "but it is only common sense. There is just one best way, one shortest way to perform any task involving work done with the hands,

or the hands and head working in coöperation. These efficiency men merely study to find that one best and shortest way, and when they have found it they call that task 'standardized.' Very often the efficiency is increased because the task is done with fewer motions, with better tools, because of even such a simple thing as changing the height of a work-bench, or the position of the worker."

"Yes," my husband put in, "by applying the principles of efficiency, manufacturers are enabled to save thousands of dollars. You know, Brandeis, in the famous railroad rate hearing at Washington, showed that if the railroads would work under conditions of scientific management, they could save a *million dollars a day*."

"Why, I suppose you smart men and efficiency experts will soon try to tell me and all the other women that washing dishes can be 'standarized,'" I bantered, "or that *we* could save a million dollars if we would run our homes on 'scientific management'!"

"Now, Mrs. Frederick," replied Mr. Watson

seriously, "that is really not too much to imagine. There is no older saying than 'woman's work is never done.' If the principles of efficiency can be successfully carried out in every kind of shop, factory, and business, why couldn't they be carried out equally well in the home?"

"Because," I answered, "in a factory the workers do just one thing, like sewing shoes, or cutting envelopes, and it is easy to standardize one set of operations. But in a home there are dozens, yes, hundreds, of tasks requiring totally different knowledge and movements. There is ironing, dusting, cooking, sewing, baking, and care of children. No two tasks are alike. Instead of working as she would in a factory, at one task, the home-worker peels potatoes, washes dishes, and darns stockings all in the same hour. Yes, and right in the midst of peeling the potatoes she has to drop her knife, and see why the baby is crying.

"You men simply don't understand anything about work in a home," I continued, heatedly. "One day a woman sweeps and dusts, and the

next she irons, and the next she bakes, and in-between-times she cares for babies, and sews, answers call bells and 'phones, and markets, and mends the lining of her husband's coat, and makes a cocoanut cake for Sunday!

"Perhaps she can afford one maid — perhaps she belongs to the fortunate but very small class that can afford *two*. But even then she has to see that servants don't waste, that they work the best way, and, in addition, put up with their foibles, which is almost as bad as having to do all the work herself.

"Do you mean to tell me that so many kinds of household tasks could be 'standardized,' or that the principles of scientific management could be applied in the home?" I concluded a little triumphantly. "I've talked with numbers of maids, and they all have the same plaint: that there are too many kinds of work to be done by the same person, that they never have any dependable 'off hours,' and that no two families do the same task in the same way. That is why they prefer to work in factories where one set of operations *can* be standardized;

and there you have the whole crux of the servant question."

Mr. Watson shifted his chair with a realization that he had been put up against no simple problem, nor one in which he had experience. Then he answered, "Well, I hadn't considered the idea before, but I believe so strongly in the principles of efficiency and have seen them work out so satisfactorily in every kind of shop where there *are* different kinds of work and where the owners have said just what you say, that I absolutely know that these principles must have application to *any* kind of work, and that they could be carried out successfully in the home if you women would only faithfully apply them.

"I must leave now, but I tell you what I'll do. I'll come over some evening to talk to you, and see what we can figure out on home efficiency. I certainly don't see why you couldn't work out some of its principles in a mighty interesting way. Suppose you read this book on scientific management?"

After Mr. Watson had gone, I turned eagerly

to my husband. "George," I said, "that efficiency gospel is going to mean a great deal to modern housekeeping, in spite of some doubts I have. Do you know that I am going to work out those principles here in our home! I won't have you men doing all the great and noble things! I'm going to find out how these experts conduct investigations, and all about it, and then apply it to *my* factory, *my* business, *my* home."

The more I thought about it, the stronger hold the idea took upon me. Just a few days previous I had been reading an article by a prominent clubwoman who was solving the servant problem by substituting expensive household equipment in place of her three servants. Another review discussed the number of women who were living in apartments and boarding-houses, and who refused to shoulder the burdens of real homemaking. A third writer enlarged on the lack of youthful marriages, a lack which he claimed was due to the fact that young women of this era refuse to enter the drudgery of household tasks. On all sides it was the prob-

lem of the home, the problem of housekeeping and homemaking.

The home problem for the woman of wealth is simple: it is *solved.* Money, enough of it, will always buy service, just as it can procure the best in any other regard. The home problem for the women of the very poor is also fairly simple. The women of the poor themselves come from the class of servants. Their homemaking is far less complex, their tastes simple, and society demands no appearance-standard from them. Added to this, organized philanthropy *is* by every means teaching the women of the poor how to keep house in the most scientific, efficient manner. Settlements, domestic science classes, model kitchens and tenements, nursing stations, slum depots, charity boards, health boards, visiting nurses, night schools, and mission classes are teaching, *free,* the women of the poor how to transmute their old-world ignorance into the shining knowledge of the new hemisphere.

The problem, the real issue, confronts the *middle-class woman* of slight strength and still

slighter means, and of whom society expects so much — the wives of ministers on small salary, wives of bank clerks, shoe salesmen, college professors, and young men in various businesses starting to make their way. They are refined, educated women, many with a college or business training. They have one or more babies to care for, and limited finances to meet the situation.

The soaring cost of living and the necessity for keeping up a fair standard of appearances obligatory on the middle class prevent any but the more than "average" well-to-do from employing regular help. Among ten average families I know (scattered the country over) whose incomes range from $1,200 to $2,500 a year, the occupations range as follows:

Two high-grade mechanics
One salesman in photo supplies
One salesman in office equipment
One artist and illustrator
One young doctor
One lawyer
One advertising man
One literary man

Only one family of the ten employs regular help. The others depend on intermittent cleaning and a woman to do the washing. It is this

better class of refined but small-salary-family woman who becomes "all tired out," who never has any "time to herself," or who is forced to endure the slipshod methods of one retreating Lizzie after another because she cannot afford experienced help. According to figures compiled by the Business Bourse, there are 1,677,150 families in the country employing domestic help, while there are 19,023,952 families keeping house. In other words, only 8 per cent. of the families in the United States keep domestic help!

Figures of the United States Census show that each decade fewer women are entering service, chiefly because many new and apparently more attractive fields of employment are constantly being opened to the class who formerly confined their work to service alone. That is, there are fewer servants, there will continue to be less, and the wages of those few will be higher than at present.

After Mr. Watson's talk on efficiency I began to consider this middle class — to which I belong — and whose difficulties I faced every day.

I had two babies and was struggling with young and inexperienced help. If 'efficiency' accomplished such marvellous results for the shop and factory, would it not accomplish as much for my home, if I studied its principles carefully, and practised them intelligently?

I determined then to give this gospel of efficiency a fair trial, but first I wanted Mr. Watson, himself an efficiency engineer, to explain it thoroughly.

"Now, Mr. Watson," I said a few evenings later, "I want you to explain the principles of efficiency to me — the how, the why — so that I and all the other homemakers can understand it fully."

"Gladly," replied Mr. Watson; "I'll begin by stating the twelve principles on which the science of efficiency rests:

1. Ideals
2. Common Sense
3. Competent Counsel
4. Standardized Operations
5. Standardized Conditions
6. Standard Practice
7. Dispatching
8. Scheduling
9. Reliable Records
10. Discipline
11. Fair Deal
12. Efficiency Reward

"You notice that the first principle is that of 'ideals.' The first thing an efficiency expert finds out when he wishes to improve the standard of a plant is, what are its ideals? What is it running for? These experts say it is astounding how many people are running businesses and don't know *why* they are running them! I sometimes think that many women don't consciously know *why* they are running their homes. The ideal should be so strong, so clearly kept in mind, that it will overweigh any present petty difficulties. Ideals look to the future, they are the 'something' that guides, directs, propels the whole machinery, whether of business or the home — do you get my meaning?

"Women *do* have ideals as to why they run their homes," Mr. Watson continued "only they are not always concretely expressed to themselves. It may be health, it may be spotless cleanliness, social progress, or something else. I know a woman who takes her babies out for a morning's airing and leaves the parlor undusted, even though she dislikes untidiness. But her ideal of health comes first. Then another

woman has turned her guest-room over to her two boys for their wireless and electricity apparatus. You know what a pretty guest-room means to a woman! But this mother has such a strong ideal of the future training and habits of her boys that she is willing to sacrifice a present pleasure for a remote end. Ideals can be so strong as to buoy up, overweigh difficulty, and be a vital spur to effort, in the home particularly. The clearer a woman's ideals, the easier her work, the greater her strength and success. She must know the 'why' of her business.

"Common Sense is the next principle, and some people think this homely term covers all the principles. It is only common sense not to stoop for a pot if you can hang it where you don't need to stoop — and it is efficiency as well."

"And what does 'competent counsel,' mean?" I questioned.

"Competent Counsel means expert advice and help. The efficiency engineers who are called in to large factories to find what is wrong, or suggest better methods, are one kind of competent counsel."

"Yes, but there are no efficiency experts in housekeeping, are there?" I inquired.

"If the housewife would only realize it, there is more expert advice being offered her free than is being offered any manufacturer. Take the pages in all the best publications devoted to the science of home management. The finest specialists and experts are retained by magazines to tell women how to care for babies, prepare foods, how to economize and how to make clothing. Both the booklets and the advertisements of various advertisers inform the housewife of new methods, recipes, devices, materials. The so-called 'Farmers' Bulletins' issued by the Department of Agriculture are many of them equal to a correspondence course in home economics, as for instance, 'Eggs and Their Uses as Food,' 'Economical Cuts of Meats,' which are sent free to any one on application. Perhaps you do not know how to use your oven properly. Large corporations like the gas company and others are only too glad to send a representative to tell you just how to use your stove, and inform you on other points. I learned the other day that

it costs a certain sum an hour for the large burner, so much for the small burner, and so much for the little 'simmerer.' This exact knowledge should help one to save fuel. Demonstrators of other concerns, food and household shows, all act as 'competent counsel' to the housewife and homemaker.

"Then comes Standardized Operations, which includes the oft-mentioned 'motion study,'" Mr. Watson continued. "The homemaker takes countless steps and motions in every task, many of which are entirely avoidable. She may walk twenty feet to hang up the egg-beater; she may wash dishes in a way that wastes time and effort; or she lifts separately each piece of laundry from the basket at her feet, when the efficient thing would be to place the whole basket at her own level. Standardized conditions mean the right height of work-table, proper light, ventilation, and the correct tool for the purpose. In shops and factories where the experts have studied the manner in which work is done, and where, after repeated experiment, the one best method and best set of conditions has been determined,

this best, shortest and most efficient way is written down so that all workers may read it. That is, the task is reduced to 'standard practice,' and the housekeeper can find countless tasks which she can reduce to standard practice, with a saving of effort, time, and vitality."

"What is this next point of 'Dispatching'?" I asked. "I know the best way to do a number of things, but I never can plan my work so as to get it done without interruption. I begin to cut out a waist, and the children want a drink and I have to stop and get it, and when I come back my pattern and goods are all upset, and I have almost forgotten what I was doing."

"There," laughed Mr. Watson, "is just where you need the principles of 'dispatching,' and 'scheduling.' Planning and arranging work come under these points. For instance, a train starts from New York at 4 P. M., and arrives at Chicago the next morning at nine. The 'dispatching' consists in moving the train along so that it will reach every station at the right time. Applied to housework it would mean that there was a definite regular time for each task, so that

each task was done at a certain time in relation to other tasks. You wouldn't cut out your waist unless you were sure you wouldn't be interrupted, you see.

"The 'Schedule' is the eighteen hours it takes the train to reach Chicago, and it is based on various trials and methods which enable it to make Chicago in just eighteen hours and no less. A housewife can find out her schedules for various tasks, how long it takes to make a cake, or clean the bathroom. Then, when she knows her schedule, she can more accurately plan or dispatch her work without fear of interruption."

"Very often I read some helpful article in the magazines," I remarked, "but when I want it, I can't find it."

"Ah, I thought so," Mr. Watson laughed. "You need 'Reliable Records' in your home-management, I see. We will take that up in detail later.

"And if the remaining principles of 'Discipline,' 'Fair Deal' and 'Efficiency Reward' could be carried out in the home," he concluded, "I

venture to say that this whole awesome 'servant problem' would be solved. One of the remarkable things about scientific management is that there have been few, if any, strikes in the shops where its principles are in practice. The men remain because they are treated fairly, and their interests looked out for by the owner.

"Ninety per cent. of servant troubles are at bottom the fault of the mistress," Mr. Watson declared. "Now if a woman knew and applied scientifically the principle of 'fair play' her help wouldn't leave her, sick, in bed, as I have heard some maids have done. An efficient mistress would handle her help as scientifically as the manager of a big shop. She will use the principle of 'efficiency reward' with her helpers, and know how to secure from them that 'initiative' — that something over and above mere work which is essential, while at the same time she improves the conditions under which they work."

Mr. Watson looked at me across the table. "Now you understand clearly what efficiency means — not expensive equipment or impracti-

cal theories, but simple principles of work which enable you and every homemaker to do her household tasks in the best way, with least effort and greatest success."

"If efficiency in the home can accomplish all you make me believe it can," I replied, "a new housekeeping will have come, and homemaking will be the greatest profession."

CHAPTER TWO

APPLYING "STANDARD PRACTICE" AND "MOTION STUDY" TO HOUSEHOLD TASKS

USUALLY after our dinner I wash forty-eight pieces of china, twenty-two pieces of silver and ten utensils and pots, or eighty pieces in all; and for years I never realized that I actually made eighty wrong motions in the washing alone, not counting others in the sorting, wiping, and laying away. Like all other women I thought that there couldn't be much improvement in the same old task of washing dishes.

The drainboard of my sink is at the *right*. Now imagine me at the sink, dishes in dishpan, with a tray at my right to lay the dishes on when washed. What do I do? I take up a plate with my left hand and scour it back and front with the dishcloth which I hold in my right hand. Then I pass my left hand *across* my right arm, away over the tray, and lay the plate on the tray.

I move my left arm across my right arm in this awkward way every time I lay a dish on the tray. If I didn't do this I would have to drop the cloth from my right hand and change the plate from my left hand (in which I had held it while washing it) to my right hand, which would lay it on the tray. What else could I do? I will tell you in a minute.

I measured the height of the bottom of my sink from the floor and found it was only 24 inches. The sink basin was only $5\frac{1}{4}$ inches deep. That is why the water slopped over the pan and over the edge of the sink. Besides, our builder had carefully planned a dish closet over the sink at the exact height to strike the top of my head when I bobbed it up from my work!

Now for some other mistakes: I didn't scrape my dishes thoroughly, so the water became greasy very soon. I sloshed a cake of soap, about in the water—particles of which stuck to the edges of the dishes. I used a tray to drain on, and the bottom dishes became cold and sloppy before they could be dried. My towels became wet, and I had to walk to the hall shelf

for others. I dried the dishes and laid them on the table, then I picked them up (a second handling) and carried them to the pantry at the far end of the kitchen.

It took me forty-five minutes to scrape, wash, and dry those eighty dishes by using wrong methods; now I wash the same number of pieces in thirty minutes, or a gain of fifteen minutes.

How did I do it? I couldn't raise the sink because it is built in at that height; but I raised my pan four inches by placing it on an inverted sink-strainer (or I might have bought a sink-rack, costing 10 cents, for the same purpose). Lifting the pan to a table or the top of set tubs is not wise, as the pan must be lifted up and down each time the water needs changing. Neither could I make the sink deeper. Stupidity of builders is the only reason why sinks are low and shallow, and why out of sixty house and apartment sinks examined recently two thirds measured only from 22 to 30 inches from the floor.

I have made careful tests on women of different heights to find the approximate proper height

of sink for any given height of woman. A uniform ratio seems to be in effect; for every five inches difference in the woman's height there is a corresponding change of two inches and a half in the proper height of sink, table, or ironing-board. That is, the best height for a woman 5 feet $2\frac{1}{2}$ inches tall is 2 feet 5 inches, or 29 inches. For a woman five inches taller the proper height is 2 feet $7\frac{1}{2}$ inches, or $31\frac{1}{2}$ inches. I have also found that the proper and best height for a table is, for the same woman, the proper height for the bottom of her sink to be from the floor, and the best height for her ironing-board. This shows that there is one best height for all working surfaces in the home at which the least strain is felt on the arms.

The following figures will show you if your ironing-board or sink or table is at the proper level for your height:

Height of Woman	Proper Height of Working Surface
4 feet 10 inches	27 inches
4 " 11 "	$27\frac{1}{2}$ "
5 "	28 "
5 " 1 "	$28\frac{1}{2}$ "

Height of Woman	Proper Height of Working Surface
5 feet 2 inches	29 inches
5 " 3 "	29½ "
5 " 4 "	30 "
5 " 5 "	30½ "
5 " 6 "	31 "
5 " 7 "	31½ "
5 " 8 "	32 "
5 " 9 "	32½ "
5 " 10 "	33 "
5 " 11 "	33½ "

Fortunately I have been able to have my drainboard changed from the right to the *left* of the sink, which is always the one best position for a drainboard. Now I pick up a plate with my left hand, scour it with the cloth held in the right hand, and lay the plate on the tray with my left hand, without changing hands or passing my left arm across my right arm. My left hand is capable of repeating the "laying-down motion" very fast and very easily, while the right hand never drops the cloth, but scours one dish after another rapidly. Try it and see the difference it makes. Had I not been able to change the drainboard from right to left I might

have wheeled a table to the *left* side of the sink. I also bought a wire dish-drainer costing 50 cents, and a soap-shaker, a dish-mop and a plate-scraper costing 10 cents each. Then I carefully separated the whole process into three operations: scraping and stacking, washing, drying and laying away.

My first step was: Pots and pans filled with water. Dishes scraped with plate-scraper and stacked as to size, at right of worker. Towels to hand, hot suds made in pan by soap-shaker.

My second step was: Glassware placed in pan, washed with mop or small-handled brush in right hand, lifted to drain-rack with left hand. Silver placed to soak in pan while glass is dried, sorted, placed on tray and carried to place. Repeat process with silver, drying and sorting on to tray at the same time, and remove to place.

My third step was: Dishes of same kind placed in pan, washed, lifted out by left hand to dish-drainer. Pour scalding water on dishes in drainer, and leave to dry without wiping, while the pots and pans are scoured with a combination wire-bristle brush. If there is a hot-

water faucet a method that saves still more steps and time is to attach a foot or two of rubber hose and spray the dishes from the nozzle. Dishes are dry by the time pots are finished. Lift dishes from drainer, sort and stack on to tray, and carry to place. Hang up pots, pans, and all utensils. Rinse out towels and hang to dry.

Note, please, that my drainer is at my *left* and the dishes are stacked to the *right*. (The ideal arrangement is a drainboard on *each* side of the sink.) This will make a difference of ten minutes on a task requiring forty-five minutes. Note also that dishes, and particularly silver, are sorted as laid down on the tray. Note that the drainer does away with all wiping of the dishes. This cuts the time down considerably and saves the necessity of rubbing each piece with a dish-towel of doubtful cleanliness. While the dishes are drying the pots are cleaned with a wire-bristle brush.

"Don't you wipe the dishes at all?" some woman will ask. What is the use, when it is unnecessary and takes useless time? The glass

must be wiped, of course, because very hot water cannot be poured on it; silver must be wiped, because it doesn't dry itself as china does. Rinsing in scalding water gives china a better gloss than hand polishing.

I have thus worked out for myself a "standard practice" method of dishwashing which I have described in detail to show how any household task can be studied, analyzed, and separated into two or three simple processes. By doing dishwashing in this best, or "standard," way, I am able to do it quicker, more easily, and without awkward, useless motions.

In housekeeping, just as in other industries, "motion study" means close analysis of work, whether it is peeling potatoes, making bread, or dusting a room. By this careful observation of how I do my work, I find what motions are efficient motions, and what motions are unnecessary and inefficient.

There is nothing difficult or mysterious about "motion study." Everything we do is motions, whether we stand or stoop; every task is composed of motions or groups of motions; if the

motions are few, easy and pleasant, the task is easy; if the motions are useless and fatiguing, the task is drudgifying. The whole object of "motion study" in the home is to analyze the way we do each task so that we may learn to do it in the way that is most pleasant and least fatiguing.

Another general task is cleaning, and I next studied how I worked on my general cleaning day to see if I could improve my methods. I had been accustomed to clean windows, sweep the rugs, and wipe and dust the furniture of each room separately. On noticing carefully what I did, I found that cleaning was composed of four or more processes requiring many kinds of motions, and the use of different utensils, such as broom, duster, mop, and pail. Particularly these processes required change of position, and were totally unrelated. That is, first I swept, standing upright; then I ran for water and window-rags, and cleaned windows, sitting. Then dropping these tools I wiped floors with water or with an oiled rag, on my knees; and last I stood up or bent over to do the dusting.

I lost time whenever I laid down or picked up utensils, or whenever I changed my "shift" from one task to another; and it took some time to change my speed from sweeping to scrubbing, for instance.

What did I do? The simplest thing. First, I changed the window cleaning to a different afternoon entirely, as it is an unrelated task and need not be loaded on to the general cleaning day. Then I did the sweeping of all the rooms first, and carried the utensils in that work to the kitchen. Next I wiped all the floors and carried the pail, etc., to the kitchen. Last I dusted one room after another. By specializing these tasks in this simple way I just naturally speeded up on each one and finished the work more rapidly, by at least twenty minutes, than if I had cleaned each room and done each task separately.

Our washing is done at home, as it is done in many homes, without a washing machine, and with only a common boiler. I next studied to see if I could find any improvement in the method of this common task. I noted that a

great deal of time was lost in handling clothes which had not been properly sorted before the washing. Then, as I put all the clothes through the blue rinsing water, I noticed that I lifted up each piece from the water, and opened it out, particularly the smaller pieces. "Why do I lift each piece like this?" I said to myself, "and is it necessary?" The answer was that I lifted each piece out of the water to see if it were a piece to be starched or not. I decided there must be some way to avoid this repeated motion of lifting each piece, and after a little experimenting I soaked the starched pieces in one tub and the unstarched pieces in another tub before washing. Then I boiled all unstarched white pieces first, then rinsed them and placed them in a basket to be hung up. Then I washed and boiled all starched pieces separately, and rinsed and hung them up. I saved more than fifteen minutes by washing the two different kinds of clothes separately, because it previously took me that time to hold up each piece and decide whether it was to be starched or not — just lost

In ironing, I found that my board, just like the sink, was not at the right height. It was so high that I couldn't obtain enough purchase on my iron without extra effort. I simply lowered the board, made it very steady, and thus helped my efficiency. Even to-day so many women use the poor and inefficient method of supporting an ironing-board upon the back of a chair and the table, where it is always shaky, instead of using a good board on a stand capable of adjustment to various heights.

In ironing I followed the same idea of specialization: all starched pieces first, all flat pieces last. It is this separation and specialization that enable the worker to "speed up" as no other plan allows.

I noticed that when I sprinkled clothes I first piled them all on a table, dampened each piece, rolled it and stooped to lay each separate piece in the clothes-basket at my feet — an unnecessary motion for each of the dozens of pieces! I now place the basket on a high chair beside me, level with my table, and never stoop.

I found I was making the same mistake when

I hung up the clothes, stooping for each piece in the basket to hang it up. I found I could stand between two lines and fill both alternately without waste motion. The clothes-basket I wheeled about in an abandoned go-cart — motion, effort and time saved — which kept the basket at the level of my waist instead of my feet.

Even the simplest one-process tasks may be standardized, and a better way found which will entail less waste motion, which means waste vitality. One of the most common of tasks is to beat eggs, whip cream, or mix a cake batter. In each of these cases, the general way is to have the ingredients in a bowl, using the right hand to beat or manipulate the spoon or egg whip, while the left hand holds the bowl steady. We have become so accustomed to steadying a bowl in this way, with the left hand, that we can hardly believe such a method is extremely inefficient. It requires a strong and steady hold on the bowl to keep it at the proper slant or purchase for beating its contents. Why waste energy in keeping a utensil in place when we can easily

clamp any bowl or glass churn to the table, and save the wasted motion of holding the utensil in place for the real task of beating or whipping? Yet I could multiply instances where a woman mashes potatoes, strains apple sauce or purée, or beats mayonnaise, using a great deal of energy to steady the bowl in her left hand when she might use this wasted motion on the real task of the right hand.

In connection with the sink and the ironing-board I have mentioned the height of the working surface as most important. No less important is the comfortable position of the worker. I should lay it down as a cardinal principle of efficient work, to *sit* down to it, rather than stand, whenever possible. One can prepare all vegetables, make cake or pie, wash dishes and iron sitting down. When one is standing there is a strain to keep the body upright; when the body is seated this strain or motion is removed, and that much effort put at the service of the real task in hand.

Another form of waste motion occurs in the bringing together of the proper ingredients,

utensils and materials in one place, *before* the real task begins. The efficiency engineers who study conditions in factories watch a man at work. They note how much time it takes him to do the actual work. They time him on how long it takes him to bring his tools together, and how long it takes him to put the finished work away.

Supposing it should take a man ten minutes to do a piece of work. If he does it in ten minutes, he will have an efficiency of approximately 100 per cent. But if it takes him four unnecessary minutes to bring his tools together, or to lay his work away, his efficiency will be lowered to 71 per cent. The whole aim, of course, is to have the efficiency of the worker as near 100 per cent. as possible.

I know dozens of women who would be graded 100 per cent. on the actual time they take in making a cake, or doing other tasks; but they waste motion — and hence time — bringing utensils and materials together before they begin the actual task; instead of grouping flour and flavouring, baking-powder, eggs and sugar all

on the table at once, they beat the eggs, then stop and get the sugar, then reach for the flavouring, and possibly have to go for the forgotten cup of milk in the icebox.

Another most important cause of waste motion in the kitchen is poor arrangement of utensils, not only with regard to a particular task, but with regard to all tasks, and other equipment. This is a point given great emphasis by efficiency engineers. Whole factories have been remodelled so that the machines could be in a right position, not only for the individual worker, but in right relation to other equipment and processes of the factory.

This idea is especially applicable to the home. Perhaps you have a bread board of just the right height for your work — but where is its right position in your kitchen in relation to other utensils and to other tasks you have to do? You may have the finest egg and cream whip, but where do you hang it, so that it is in just the right relation to all your other equipment? And do you have to walk twenty feet for it when you need it? This point of efficiency in arrange-

ment is so vital and extensive that I want to take a whole chapter to discuss it.

When we have studied a task, and standardized it, we have found out, not only the best method of doing that task, but the time that best method requires — how long it will take us to do that task. The object of all standardization is really, then, to find out the shortest way, as well as the best way. Standardization implies skill, and the rapidity that comes from practice. In music we see that this is particularly true, because by holding the hands in just the right way, the performer has so standardized his work that he is able to play hundreds of notes a minute.

In shops and factories the efficiency engineers make "time studies" of the work of the men, down to the fraction of a second, and on these studies the wages of the men are determined. Such detail is not needed in the home, but the object of our standardization in the home also is to find out the shortest, or more properly the average, time it takes us to perform any given task. When I know how long it takes me to do

some of my common tasks, I can the better plan my entire work along "schedule" lines.

Here is a list of some of the common tasks I do, and how long each requires, working under "standard" conditions:

Task	*Time required*
Baby's bath	15 minutes
Working bread (3 operations)	12 minutes
Mix layer cake	10 minutes
Ice layer cake	5 minutes
Salad dressing	15 minutes
Pudding or dessert	12–15 minutes
Dust, brush up five small rooms daily	30 minutes
Mix pan of muffins	6 minutes
Mix pan of biscuit	8 minutes
Make pie	10–12 minutes
Polish silver	40 minutes
Clean bathroom	20 minutes

A last cause of waste motion is the use of the inefficient or wrong tool. I have often used a chopping bowl and knife, and it took me seven minutes to chop one pound of cooked meat. The person using a chopping knife raises and lowers his knife as he chops, and half the time

he is not chopping meat, but air. Now with a meat chopper of family size I can grind three pounds of meat in one minute. That is because I am grinding meat all the time, and air none of the time, and because there is no wasted motion of raised and lowered arm fifty times or more.

It is very often true that an improved labour-saver or household device is able to standardize work better than any method. This is true of a chopper, of a vacuum cleaner, which takes the place of both broom and duster; of a gas or electric iron, which saves the repeated motion of changing irons, and of other equipment. But too many women put over-emphasis on the tool and too little on themselves. If a woman is inefficient, how can she use a tool except in an inefficient way? I believe strongly that woman's liberation from drudgery lies not so much in tools as in her own improved methods of work.

A strong reason why the tool is not as important as more efficient working methods is that while some women can afford a vacuum cleaner or electric motor or other excellent tool, hun-

dreds and thousands of women cannot afford them and other devices, even though they wish to use them. But *any one* of these thousands of women *can* reduce the drudgery of their work, by better planning, more intelligent systematizing, and observation and experiment with their work and how they do it, until they have raised it to a greater skill — to "standard practice."

For instance, in improving my method of dishwashing, I did buy several small tools to render the work more efficient. But was that the main factor in making the work easier, and causing it to require less time? The important thing was *the way* the dishes were handled, the position of the sink, the height of the sink, the method of sorting, etc.

It might be argued that it is useless, anyway, to reduce dishwashing or any other task to a "standard practice," because there are mechanical dishwashers and devices which will eventually replace all hand washing — that, in short, the tool is the salvation of the housekeeper, and not standard practice methods.

But while one woman is able to afford such a

device, thousands of other women are not able to afford all the labour-savers on the market. Moreover, no matter how perfect may be a mechanical labour-saver, human hands must bring the dishes to it, take them out, lay them away — in short, operate this device or any other; and whether the worker performs all the operations by hand or operates a machine, the principles of efficiency are the same, and the more deftly she handles her tool the greater her speed and output.

From closely watching myself and others at work, I have grouped the causes which make for 80 per cent, of the inefficiency in household tasks, as follows:

1. The worker does not have all the needful tools or utensils at hand before her when she begins work. Therefore

2. She wastes time and effort walking to, hunting for or fetching ingredients, tools or materials she neglected to have at hand when she began the task.

3. She stops in the middle of one task to do something else quite unrelated.

4. She lowers the efficiency of good work by losing time putting tools or work away, generally due to poor arrangement of kitchen, pantry, and closets.

5. She uses a poor tool, or a wrong one; or works at a table, sink, ironing-board or moulding-board of the wrong height from the floor.

6. She loses time because she does not keep sufficient supplies on hand, and because she does not keep her tools and utensils in good condition.

Any worker who desires to eliminate waste motion, standardize her tasks, and increase her efficiency 50 per cent., can ask herself these questions:

1. Is my table, stool, board, or working surface at the right height?
2. Are my utensils and materials needed for this task all before me when I begin?
3. Do I have to stoop unnecessarily? Do I take useless steps?
4. Are my utensils arranged with proper regard to each other, and to other tasks?
5. Do I waste motion and energy holding a bowl or utensil in place when it should be screwed to the table?
6. Is my position comfortable?
7. Are the tools and utensils grouped properly before me for this particular task?
8. Am I using the best and right tool for the purpose?
9. Is the tool properly adjusted and in good condition before I begin work?
10. Am I making any awkward motions, or ones I could omit?

Since much inefficiency and waste motion is due to poor arrangement of the kitchen and its fittings, I will devote the next chapter to discussing "Standardized Conditions" in kitchen arrangement.

CHAPTER THREE

STANDARDIZING CONDITIONS IN KITCHEN ARRANGEMENT

I RECALL a young bride who recently showed me her new kitchen. "Isn't it a beauty?" she exclaimed. It certainly had modern appliances of every kind. But her stove was in a recess of the kitchen at one end. Her pantry was twenty feet away at the opposite end. Every time she wanted to use a frying pan she had to walk twenty feet to get it, and, after using it, she had to walk twenty feet to put it away. I know blocks and blocks of houses in a city over 100,000 population which are all built that way. When I see such a kitchen I am reminded of the barker I once heard outside of a country circus. "Ladies and gentlemen," he was calling, "come in and see the great African crocodile. It measures 18 feet from the tip of its nose to the tip of its tail, and 18 feet from the tip of its tail to

the tip of its nose, making in all, ladies and gentlemen, a grand total of 36 feet." How many women are "making a grand total" of thirty-six steps every time they hang up the egg-beater?

The first step toward the efficiency of any kitchen is to have the kitchen small, compact, and without long narrow pantries and closets. Many women are under the impression that a "roomy" kitchen is desirable. It may appear attractive, but a careful test of the way work is done in a "roomy" kitchen will discover waste spaces between the equipment, and hence waste motion between the work. Country kitchens are particularly apt to be large, and are often a combined sitting-room and kitchen. This plan seems cosy, but is inefficient because of the presence of lounges, flowers, and sewing — all unrelated to the true work of the kitchen, which is the preparing of food. It is much wiser to have the kitchen small, and make a separate sitting-room so that the tired cook may rest in a room other than the one in which she has worked.

A good-sized kitchen for a small-sized house is 10 x 12; the ideal is nearly square, or only slightly longer than wide. After deciding that our kitchen must be small, the next step in standardizing its arrangement is to place the principal equipment of stove, sink, tables, and closet sin right relation to each other and the processes they develop. In planning for any kitchen I have found, after close study, that there are just two main processes in all kitchen work. Every task done, peeling potatoes or washing a skillet, can be divided clearly under one or the other group. One group is those processes which *prepare* the meal; the second group is those processes which *clear away* the meal. *Each of these processes covers distinct equipment.* The reason for so much inefficiency in kitchen work is almost solely because these two processes are not kept separate, and because, particularly, *the equipment of each process is not kept together.*

I want to explain this idea in detail, because it is so very important, although so very simple, as every intelligent woman will see if she

only stops to think. Let me state it in this way:

	Preparing Meal		*Equipment*
Group I	1. Preparing 2. Cooking 3. Serving	All foods	1. Icebox, pantry, table, kitchen-cabinet 2. Stove, utensils 3. Table, trays
	Clearing Meal		
Group II	1. Removing 2. Washing 3. Laying away	All foods utensils dishes	1. Trays, tables 2. Sink, drain 3. Closets, pantry, icebox

Suppose, for instance, we wish to make an omelet. We take eggs and milk from the icebox or pantry (follow diagram), beat it at a table, cook on stove, serve on platter, and take to dining-room. This is the preparing process of this dish, and is the simplest method we can follow. On the return trip, or the processes of clearing away, I take the empty platter from the dining-room to the kitchen sink, wash it, and lay it away.

Now if the kitchen table, stove, and sink are in the right relation to each other, we can make our omelet or any other dish with the least possible number of steps, motion, time, and fatigue. But if the stove, sink, and tables are not in right relation to each other, it will require twice as much energy to cook and serve our omelet.

The definite equipment of the processes of Group I come in order this way:

Icebox — preparing table — stove — serving table — dining-room.

The definite equipment of the processes of Group II come in this order:

Sink table — sink-drain — china and dish closets.

In my small kitchen, therefore, I have arranged the equipment as follows: first, at the south, an icebox, then a kitchen cabinet, then the stove, and last a small serving table. At the other side of the room come, first to left, china shelves, then sink, and last at right, sink table.

To make my omelet, I take materials from icebox, turn a step to right, where I beat it on surface of cabinet, turn one more step to right for stove, and a last step to right lays it on the serving table, when I can carry it to kitchen. On the return trip I take the soiled platter from dining-room directly to sink table, wheel left to sink, left to drain, and last, left to closet shelves.

I have drawn two diagrams which show the making of an omelet under two arrangements of equipment. One is a steady track from icebox to dining-room; the other is a crossing and recrossing like the tracks of a hound after a hare.

I have dwelt at length on this point, because it is the first vital point, the heart, or crux, of the whole matter of "step-taking." It is so easy to have the equipment in right relations, but how many kitchens there are where the sink is next the pantry, where it is useless; where the stove and sink are adjacent; where the china shelves and the stove are alongside, with nothing to do with each other. Efficiency engineers who have been called in to standardize the tasks

in factories have, after examination, found that each separate operation was being done very well; but time and recrossing of materials resulted in waste, because the main equipment was not in right relation to other processes in the same room or the same building.

In general, I should lay down these simple rules for a right-handed person:

1. Icebox or pantry to left of preparing table; stove to right of working table, and serving table to right of stove.

2. Sink table to right of sink; drain to left of sink; closet or china shelves to left of drain.

As the next step in our standardization it is important that every bit of the main equipment, the sink, stove, cabinet top, and tables, are at the right height for the worker. Only at the right height can there be ease in working at their surfaces. The table found in chapter two will help any woman find the best height for herself; or she can by actual experiment of holding a pan on a small table, which a second person lowers and raises, adjust the most comfortable place for her arms to hold the pan or bowl.

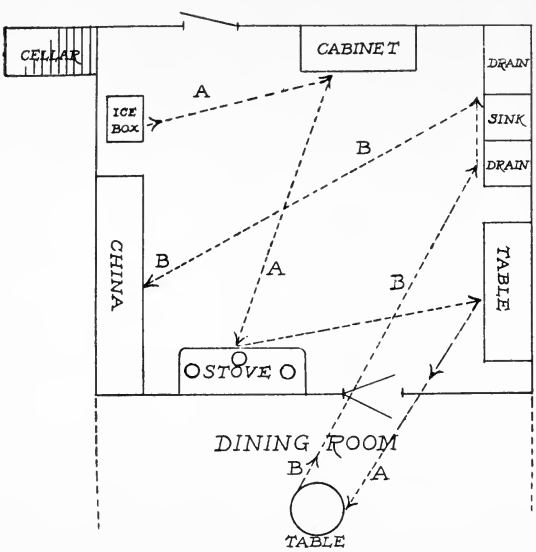


Diagram showing badly arranged equipment, which makes confused intersecting chains of steps, in either preparing or clearing away a meal.
(A — preparing; B — clearing)

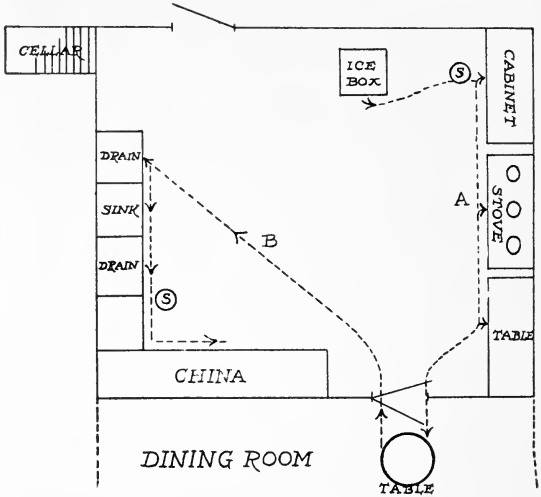


Diagram showing proper arrangement of equipment, which makes a simple chain of steps, in either preparing or clearing away a meal.
(A — preparing; B — clearing)

After this comes the arrangement, or grouping, of small utensils in proper relation to the larger processes to which they belong. That is, there is a process of preparing, a process of cooking, and a third of serving any food. Now there are small utensils which are distinctly related to each group, and these should never be placed with the utensils of another group. In preparing food we use can-opener, cleaver, egg-beater, and bread knife. These should be hung near the preparing table or cabinet top. The special small cooking utensils are skimmer, pancake turner, and long fork and large spoon, which should be hung near or over the stove. Last, the serving tools are the colander, strainers, and similar utensils; these should be over or near the serving table. Too often the utensils are all hung together, or jumbled in a drawer. Why reach across the stove for the potato masher when it belongs over the table? Why walk to the cabinet for the pancake turner when you need it for the stove? A second reason here comes in for the efficient relation of the main equipment: not only will rightly related equip-

ment save steps in the main processes of cooking and serving, but it saves steps in the handling of each and every part of the small equipment. In other words, if your stove and sink are wrongly placed your egg-beater and can-opener will be wrongly placed. Almost invariably the efficiency of the small pieces depends on the efficient relation of the large pieces.

Therefore the pots, pans, skillets, and essential cooking utensils should be grouped near the stove, not across near the sink or the china. So the mixing bowls and all cake, muffin, and bread pans should be near the working table. The china, I have said, should be on shelves in closets in the group with the sink, so that it can be laid directly on the shelves as soon as washed, and not dragged twenty feet to a distant pantry.

This matter of arrangement concerns not only the utensils and equipment, but the groceries and foods needed in the kitchen. It is just as wasteful of energy to walk ten unnecessary feet for a box of cereal as it is to walk the same unnecessary distance for the can-opener. I believe a kitchen cabinet is the best form of

step-saver in this respect, as it contains places for sugar, flour, tea and coffee, cereals, and small package goods. A person sitting at its moulding surface can reach all foods needed in the preparation of many dishes, without getting up or down.

No kitchen can be standardized if there is not a definite place for each article. Nothing must be overcrowded, nothing jostled with other articles. The strip of leather over a cobbler's bench has always impressed me — there are so many little pockets, in such little space, and every tool in its own niche.

Although it is included in the point of the right height of surface, I wish to emphasize the point of *all utensils being at the right height*, or at least, *not* too low nor too high for comfort in reaching. This means that most utensils should be on shelves, or hung at a comfortable height. Pot lids can be slipped in a rack on the wall, pots can be set on shelves above or near the stove at a convenient reaching height. There is positively no need for stooping to the floor for *any* utensil.

I wish now to discuss another phase of the standardization of the kitchen, and take up the light, ventilation, and surface furnishing of the standardized kitchen. I was surprised the other day to see the advertisement of a large factory building, with halftone of the building whose walls were solid panes of glass windows. On a visit to the largest publishing plant, I was struck by the overhead, brilliant light on the pressmen. Our kitchen cannot be efficient if there is poor and badly directed light on the worker and her work. It would seem as if builders just stuck in a window for pleasure, or for a joke, without any relation to the idea that *work*, and work requiring scrupulous cleanliness, was going on behind that window. The light should come from the side of the worker, if possible, and certainly the worker should never stand in his own light. The placing of artificial light is just as important, and there is nothing more distressing than to cook in one's own shadow. Every kitchen task, washing a cream pitcher, picking over a salad, needs the most excellent light to insure the task being done in a sanitary way.

Cooking almost always necessitates the presence of some odour in the room. The very combustion of the fuel, not to mention the cooking of the food, makes an odour. The kitchen suffers most from the contamination of its air by odours — which decrease the amount of oxygen — and that is why the cook has a headache so often! The windows should allow plenty of ventilation; large stoves can be fitted with an iron hood to carry off the odours; ventilators can be fitted into the flue, or ventilating fans operated by a current. Ventilation is part of compulsory factory law, and it certainly needs the attention of the efficient home-maker in her home.

The floor covering of the kitchen should allow complete and easy washing; the surface should not be covered with any porous material which will absorb or stain with grease. Linoleum, tile, and a new cork material very restful to the feet are the best coverings; wood is too porous, and turns dark and ugly with washing. The base-board should be curved, rather than square, to avoid unsanitary cracks. The walls and ceiling

are best painted, or covered with washable Sanitas, both of which materials allow perfect washing. All the woodwork and trim should be of hard wood, with a finish that allows frequent and easy washing. The colour of the kitchen should be chosen with an eye to light, cheer, and coolness; hence light tones of green, tan, and blue make the most attractive kitchens.

The most important point in the choice of fittings for the kitchen is that of "washability." I have been through the kitchens of one of the largest manufacturers of canned soups and similar products, the walls, floors, and ceilings of which were spotless tile — not only for looks, but because a tile surface can be washed, and sterilized if need be. It is impossible to achieve this result in our individual homes; but our ideal of the standardized kitchen fittings must be chairs, and tables with straight legs, avoidance of crannies and cracks which will gather dirt or make a choice breeding place for our friend the roach. Open plumbing, tables covered with zinc, galvanized iron, or porcelain, are all essential to the sanitation of the standardized kitchen.

To summarize, our standardized kitchen must have its main equipment placed in the right relation to the processes each entails; the small equipment of each related group must be hung or placed with the larger equipment of which it is a part; all working surfaces should be at the right height for the worker; all dry supplies, pots, utensils, and crockery must be kept in the closest relation to the work in which they are needed; all shelves and hooks should be at or above the waist of the worker, to avoid either stooping or reaching; all the furnishings of the kitchen, the walls, the floor, the tables and chairs should be of a kind to allow perfect cleansing; proper and sufficient light and ventilation are essential to the success and comfort of the work and the worker.

In the following chapter I want to tell you how to choose the right tools for your work.

CHAPTER FOUR

THE EFFICIENT TOOL

PERHAPS the reader recalls the cheap old story of the Irish servant who left her place because she complained that there was hash to prepare for breakfast every morning, and she had to leave because her teeth wouldn't stand it!

I think we would agree that this servant was using the wrong tool. Some women to-day are still using the wrong tool, although the manufacture and sale of improved equipment for the home are among America's foremost industries. The modern housekeeper in this country cannot complain that improved devices are not offered her; every magazine page, thousands of booklets, department store and hardware demonstrations, put her in touch with tools, labour-savers, and household devices of remarkable variety in purposes, quality, and construction.

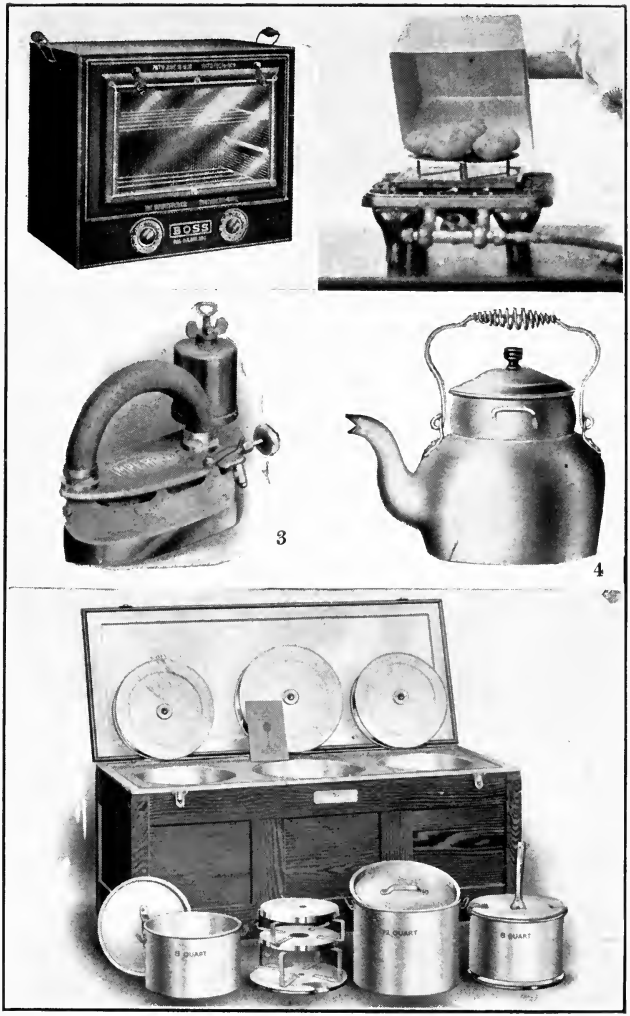
It would seem as if the increase in the pro-

duction of labour-savers for the home was in direct ratio to the decrease in the number of human servants. I believe this is true; investigation in foreign countries at the present time where service is still cheap shows that not half the number of devices are sold abroad as in this country. When the American homemaker, because of economy and scarcity, is forced to dispense with service, and do the work herself, she turns to the mechanical servant which every manufacturer is urging her to buy, and which Yankee ingenuity has perfected in a high degree. The question before the homemaker is not whether she shall use tools, but *what* tools are most efficient for her particular household needs?

Many household devices sold in recent years have been made only to sell, although I believe firmly that the bulk of those now on the market are offered because they are of sterling quality. But the first question the homemaker must ask herself is not, "Is this a good tool?" but, "Do I actually need it?" I have noticed that many women have an apparent mild mania for pur-

chasing tools and pots and pans which they don't use. Their pantries are cluttered with egg-beaters, cake-turners, fancy jelly moulds, and cake-pans which are rarely used. They are attracted by the cleverness and cheapness of a new device, and buy it at once, with the result of a duplication of unused trash. One woman laughingly acknowledged, when I found six egg-beaters in her kitchen, that her god was "Pan."

In choosing a larger and more expensive equipment, like a percolator, an electric iron, or a cherry-seeder, the homemaker should ask herself the same question, "Do I need it? Will I get my investment out of it?" I recall recently going through a department store basement and looking at equipment and the clerk showed me what he called a bean-cutter. It was an amazing mechanism, which cut string beans in half lengthwise. When I think of the buying of any tool my mind reverts to that bean-cutter. How many times a year would I have used it? And where would I have kept it when not in use? The cutter, in a boarding-house or hotel,



FUEL-SAVERS

(1) Portable Oven with Window Prevents Loss of Heat
(2) Device Utilizing One Burner for Baking
(3) Gasolene Iron with Concentrated Heating Surface
(4) Tea Kettle and Double Boiler Combined
(5) Well-Insulated Fuel-Saving Fireless Cooker

would doubtless have paid the cost of its investment; but in my small family, where string beans are confined to a short few weeks' season, a bean-cutter would have been dead investment, and dead storage.

Buying any tool should be considered as an investment, although not all women look at it in this proper way. A manufacturer who purchases new equipment charges it to "plant," and distributes the expense along a number of years. The same view should be taken of an investment in a household labour-saver. For instance, an electric iron, costing $6 and which would last five years, should be reckoned as interest on the investment, or about 36 cents a year: the depreciation might be 10 per cent. or 60 cents so that the yearly cost should be estimated at about 96 cents a year, or less than 2 cents a week. It is almost certain that the iron will pay for this weekly cost, because it is used weekly, and will save that amount and more in the economy of fuel and labour in the weekly ironing. But suppose some other electric device, like a waffle-iron costing $10, is bought, and is

used only a few weeks in each season; how many years of waffles will it take to make up the investment to her? I use this illustration, not to knock any particular device, but to show that the purchaser must stop and consider if she is going to use that particular device often and frequently enough to pay for its original cost, plus the cost of its maintenance and depreciation.

After deciding that for *her* needs, *her* size family, it will pay her to have a particular tool, the homemaker should investigate the tool, and see if it is built or made on scientific principles. This is particularly necessary with regard to washing machines, suction sweepers, iceboxes, and equipment in whose construction laws of chemistry or physics are involved. Is the "dolly" type of washer better than the vacuum idea, for clothes? Is it better to have the ice at the side or top of the food cabinet? Do the bearings or ratchets or insulation of any piece of mechanism or equipment comply with right laws of construction? Unless she investigates these points, reading the particular literature

of each device carefully so that she understands the why of its operation the homemaker will find herself buying tools and devices which may be attractive, but which, after a time, won't work.

This point of scientific construction must also be noted in regard to the shape of a utensil as well as to the mechanism of a device. The old high, iron pot was only efficient when it was set down in a bed of embers or in the hole of a coal stove. Our modern fuels are distributed in a flat, broad, and shallow manner, as in the burners of the gas stove, oil, gasoline, or electric stove. On such broad burners, the tall, high coffee-pot or kettle are very inefficient. The new method of fuel distribution demands broad, shallow utensils whose greatest width is across, and not in height. The low egg-poacher, the flat-bottomed kettles and pans are all better than the old-fashioned models. We only waste heat when we use the tall types which do not make use of all the heating surface of the fire on which they rest.

Again, it is most important that the mechan-

ism of its parts and handles be of a comfortable shape to use in the hand. I know several devices which were excellent in construction, but which were so uncomfortable to the hand of the worker that the manufacturers ceased making them, or changed the construction to conform better with comfort.

Still more important, possibly, is the point whether the device can be easily cleaned. An appliance should save more time in doing its work than is needed by the worker to clean it. I know women who will not bother with a device like a chopper because they feel it is easier to cut certain products with a knife than take apart and wash a complicated chopper. Many other devices with beaters, nuts, screws, and "parts" are often not worth the labour they save, because of the extra labour they entail in cleaning their complicated mechanism.

It often happens that apparently excellent devices or utensils will, upon use, reveal a defect. I have bought frying pans whose surface was so uneven that the grease all slipped to one side, and it was necessary to put a small support

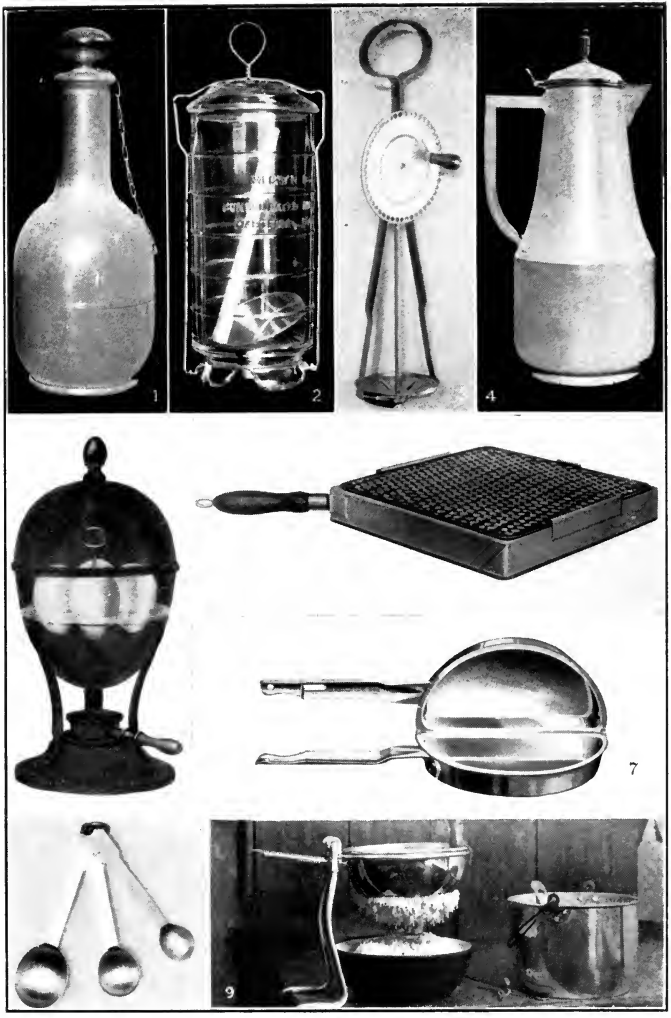
under the pan's edge. "Seconds" are very likely to prove unsatisfactory as to shape, and it almost never pays to save the 10 or 15 cents in their cost from the standard article. Teapots and pitchers that don't "pour," tins that have a bad edge to cut the hand when washed, uneven and warped dishes, come under this head.

Next comes the point of determining what material, coating, or finish the utensil or tool should possess. This should be decided not from a matter of taste, but because each material and coating has certain qualities. The material of the utensil must have resistance to heat, to wear, and to certain acids in foods. There is also the question of weight and appearance. Enamelware of the best kind radiates heat readily, and is of good appearance either in gray, white, or blue; but it chips readily, and, in the poorer grades, is apt to expose large patches of the underlying metal, which in compound with the acids in certain foods may be dangerous. Iron heats quickly, radiates quickly, is hard to keep clean, and is heavy, although for

frying it is unexcelled. Aluminum utensils are very light, and generally have no seams, which is an excellent point; they heat more slowly than enamel, but retain the heat longer, and so are particularly adapted to "fireless" methods of cooking. Ordinarily tinned utensils are very apt to rust, and become battered soon, and it is better to have enamelled or aluminum coatings, even in such pieces as the colander and dipper.

After deciding all the above points in regard to the utility and practicability of a tool, the beauty and attractive design of the tool should be considered. The oft-quoted saying of William Morris that the home should contain nothing that is not at the same time useful and beautiful can be carried into the kitchen. The painters of Holland, of France, and even of our own Colonial days, have given us inspiration for the beautiful in our kitchens. It is possible to have beautiful pots and pans, casseroles, and crockery which are at the same time most efficient and practical.

After deciding all questions of the shape,



TIME-SAVERS

(1) A Carafe Which Keeps Beverages Iced Many Hours
(2) Glass Ice-cream Freezer Which Requires No Turning
(3) Speedy Egg-beater Designed on the Turbine Principle
(4) Coffee Pot Permits Making Coffee Hours in Advance
(5) A Quick Toaster for Oil or Gas Fuels
(6) An Egg-Boiler That Boils Eggs Just Right
(7) A Double Pan Which Cooks Two Foods at Once
(8) Measuring Spoon Set Saves Lifting Different Spoons
(9) A Colander and Puree Strainer Which Gives Rapid Results

scientific construction, need, and material of her efficient tool, the homemaker must turn in the other direction and determine *her* relation to the tool, rather than its relation to her. That is, *can* she and *will* she take care of the tool properly, once she has bought it? This is the vital point in the purchase of any tool, and particularly equipment, devices or complicated mechanism in the home.

It may not be fair to say that half the tools purchased are not properly cared for; but to any one who has observed how tools are used and cared for in the average home, it is distressing to see how so much splendid equipment and mechanism is neglected, and even allowed to depreciate, because of lack of care, or because of the wrong or unintelligent care.

First, it is often true that women purchasers are ignorant of the scientific principles on which their devices are made. Proper oiling of a sewing machine, or the bearings of a wringer, may not be understood; not every woman can get the most value out of a food-chopper, because she does not care for the knives properly, or

grease the screws with lard; it takes real, scientific knowledge to run a stove correctly, as to the why of drafts, dampers, and flue; often a beautiful material, like aluminum, is tarnished almost irremediably because an alkali was used in the water to wash it; the glaze on casseroles and crockery may be unnecessarily cracked because the temperatures at which they are put in the oven, or sudden changes, from heat to cold, are not noticed. The best enamelware is chipped because it is placed too suddenly over a very hot flame, which causes the metal to expand too suddenly, and hence "chip" both inner and outer surface; the finest knives and carvers are spoiled because they are carelessly jumbled in a drawer.

The efficient tool needs efficient care, and the best tool will be but a poor servant if it is poorly and unintelligently cared for. The matter of care of tools often enters into the problem of whether the mistress is willing to purchase labour-savers for hired servants. Good tools are not always to be trusted in the hands of servants who do not understand the principles of

their mechanism. Therefore it is the intelligent mistress who does her own work, who can make the best use of the modern labour-savers, which depend on an understanding of their construction and upon proper care to be really efficient tools.

In considering any labour-saving device, in point of its relation to the worker, she asks herself, "Does this tool save me time? Does it save me steps? Does it save me labour? Does it save fuel?" All household devices and tools can therefore be grouped under these four heads:

1. Fuel-savers
2. Step-savers.
3. Labour-savers.
4. Time-savers.

Of course it may be true that any particular device covers two or three points, saving both time and steps, but this is a convenient classification.

In considering the expenses of the household, and particularly the kitchen, the item that looms largest is fuel. It takes coal or oil or gas or

electricity to cook our food. Heat is the most costly item in cooking. Now cooking is the application of a cooking temperature to food, by means of air, water, steam, or metal. It may be hot air as in roasting, hot water as in boiling, steam as in steaming, or direct contact with a heated metal or direct flame as in frying. Sometimes it is a combination of these processes. Cooking is generally done, not by contact with the flame or coal, but by the heat generated by the flame, which heats the water, the metal, or the air which does the real cooking. That is, it is the hot water that boils the potato, the heated steam which steams it, and the hot air which bakes it, and not a direct contact with coal or flame. It follows therefore that any method that conserves the loss of heat will be an efficient cooking method; any utensil which conserves heat, and thus hastens the cooking process, will reduce the amount of fuel used, and thus be a fuel-saver.

In a former paragraph on the efficient shape of utensils I touched on the point of high-shaped pots being inefficient because they do

not make use of the largest amount of heating surface upon which they are placed. I wish to emphasize this point again. Now for any boiling process it is better to place the utensil over a quick, direct flame, and use a low, shallow utensil which will cover as much heating surface as possible. This is true of a boiler, of a double boiler, and of any pan in which a liquid is heated.

Steaming and stewing are modifications of the boiling process, and it is particularly true that a steaming utensil must be broad to absorb heat, and to give off a wide surface of steam so that the food above the steam may receive as much steam as possible. Steamers, poachers, stew-pans, etc., should all be broad, low, and wide.

In baking, the food is enclosed and cooked by the hot air of an oven. It is, therefore, necessary that our oven be well insulated to prevent the escape of unnecessary heat by radiation. Portable ovens should be small and have double walls. A glass door in the oven and an oven thermometer are necessaries, as opening the

door to "find out if it's done" allows heat to escape and retards the cooking process. The oven should be placed on or above the waist level to relieve the worker from the inefficiency of stooping to care for it.

In roasting, the food is placed in a pan and surrounded by the hot air of the oven, which dries and cooks out the moisture as it cooks the food. Basting is the old-fashioned way of trying to save the moisture in the meat, so it will not be "dry." This manner of basting is very inefficient, because wasteful of heat and of the juices of the food. Better roasting utensils are made after the "double-roaster" plan, which saves heat and labour, and retains the juices. In steaming, we have a modification of the boiling process, which has the same effect as boiling, but which allows far less waste of the original food materials. Steam also saves loss of heat by evaporation, as it is the evaporating water that really cooks the food. All steamers, whether the round or square type, are fuel-savers, and all utensils for steaming should be broad and flat, as in boiling, to absorb the

greatest amount of heat from the heating surface.

The most modern adaptation of the principle of cooking with conserved heat is found in the fireless cooker. Some authority has said that the aeroplane, the wireless, and the fireless are the three greatest inventions of the twentieth century. Certainly the fireless cooker is the greatest of fuel-savers. So many women have written to me asking if the fireless will "work," that I wish to explain the fireless idea in detail. We know by experiment that we can heat a quart of water in a few minutes on any stove. But the water will gradually cool, unless we keep the fire burning under it. If we turn out the fire the cooking or boiling stops. Now it is the cold air coming in contact with the boiling water that cools the water and retards the cooking process. If we can remove the boiling water *from* the air, the water will only fall in temperature slowly, and will stay heated much longer. Now the fireless cooker is built on just this principle of conserving the heat, in the heated utensil, away from the air,

so that loss of heat is prevented, and so that cooking is enabled to go on for hours after the fire is put out. In a fireless we heat the utensil and food for a certain period over a flame, until both utensil and food in it are boiling, and the food partly cooked. Then we cut off the fire, place the boiling utensils and food in an air-tight box — the insulated cooker — and the cooking proceeds slowly.

In present types of fireless, we find them fitted with soapstone or metal disks just the size to cover each utensil. These "radiators" are then heated over a flame fire for twenty minutes, until of a high temperature; and the "radiator," supported by its rack, is then placed directly over and above the meat or food to be roasted, in its own utensil. At once the whole utensil, radiator and roast and all, are locked into the air-tight box, and the cooking process continues slowly. The Indians used this same idea in their famous clambakes, burying the clams between hot stones, covered with a bed of seaweed, to come back to a delicious hot repast several hours later. Since we wish to conserve all the

heat possible in our utensils before placing in the cooker, we should use utensils of aluminum, which conserve heat much longer than any other metal. The important point in the choice of a fireless is its insulation — whether it is of a material to withstand radiation for the longest time, and whether its "packing" is constructed satisfactorily.

This same principle of conservation of heat is used in the Thermos bottle, and the different Thermos jugs and carafes. Hot or cold liquid is placed in an air-tight receptacle, and corked at once. Since no air can reach it, the beverage or food retains its original heat or cold for twleve hours or more.

Therefore we can place the fireless at the head of our list of fuel-saving utensils. Other fuel-saving utensils or devices are:

"FUEL-SAVERS"

Fireless cookers.
Glass door ovens.
Round or square steamers.
Double roasting pans.

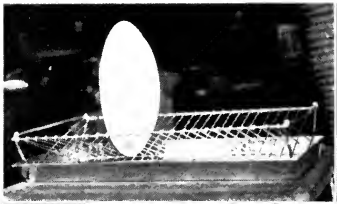
Triplicate or double pots (for one burner).
Teakettle with cereal inset.
Thermos bottles and jugs.
Radiating "hot plates" for gas and oil-stoves.
Covered hoods for irons.
Hooded "hot-plate" ovens (gas or oil).

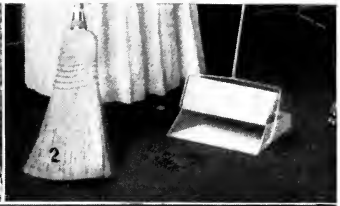
Let us see what are the time-savers:

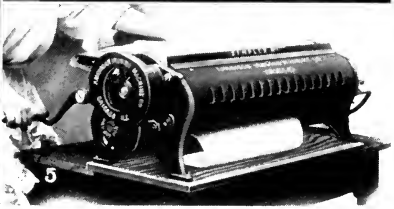
"TIME-SAVERS"

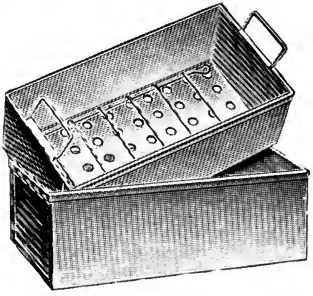
Take the food-chopper as found in many kitchens. It takes seven minutes to chop a pound of meat using a wooden bowl and knife. A chopper of family size will chop three pounds of meat in one minute. The person using a chopping knife lowers and raises his knife as he chops, and half the time he is not chopping meat, but air. But a meat-chopper is grinding meat all of the time, and air none of the time. The food-chopper can be classed as a time-saver. Following is a list of devices which are chiefly time-savers, and which are more or less familiar to the modern housekeepers:

Food choppers.
Bread mixers.









LABOUR-SAVERS

(1) Dish Drainer Allows Dishes to Dry Themselves
(2) Hooded, Long-handled Dust-pan Prevents Stooping
(3) Stationary Egg-beater Prevents Waste Motion
(4) Washboiler with Rotary Wheel Saves Rubbing
(5) Hot Mangle Which Replaces Hand Labour
(6) Silver Clean Pan Which Does Away with Silver Polishing
(7) An Efficient, Easily Cleaned Meat-chopper

Cake mixers.

Washing machines.

Dish dryers.

Silver clean pans.

I have not dwelt on the devices that use electricity. It is true that electricity has transformed our whole modern life, and many people look to the electrically equipped home as a solution of the servantless household. I am enthusiastic in favour of electric equipment, but from observation I have found it is, as yet, too expensive to supplant hand power in the operations of devices in the home. It is also true that while city dwellers have come to believe in the prevalence of the electric button, electricity is actually in use by only a fraction of our population. Until current can be supplied at a cheaper rate per kilo than at present, I feel it cannot be a great factor in reducing household expense, especially for a large or moderate size family.

But there is a long list of splendid electric equipment, and the styles and mechanism of each piece is being perfected considerably.

Such a list would include, at the head:

Electric irons.
Electric washing machines,
Electric sewing machines.
Electric buffer, and motors.
Electric vacuum cleaners.
Toasters.
Grills.
Percolators.
Electric fireless.
Electric hot plate and stoves.
Fans, ventilators.

This also seems to be the place to discuss the new fuel of denatured alcohol, and the appliances now on the market for its use. I have tested denatured-alcohol-using devices, and my experience is that at present alcohol is too dear a fuel to enable an alcohol stove to have more than a temporary and emergency use. For chafing dishes, percolators, toasters, and such uses it is unexcelled, but I doubt its practicality for more extended purposes.

Third comes the large group of labour-savers now on the market:

STEP-SAVERS

(1) "Lazy Susan" — The Silent Waitress
(2) Wheel Tray Which Serves and Clears Away Meals
(3) Kitchen Cabinet Which is a Pantry and Table in One
(4) Disappearing Icebox Saves Stair Trotting

"LABOUR-SAVERS"

Laundry mangles.
Vacuum cleaners.
Loose bottom cake tins.
Stationary bowls and mixers.
Long-handle dustpans.
Dustless mops, dusters.
Glass ice-cream freezers.
Improved mop-wringers.
Clothes sprinklers.
Great-grip nut crackers.
Attached colanders.
Potato ricers.
Slaw and vegetable cutters.
Washboilers with spigot outlets.
Percolating washing devices.
Wringers.

Fourth comes the group of step-savers, which includes many excellent devices:

"STEP-SAVERS"

Kitchen cabinets.
Wheel trays.
Self-heating irons (electric — gas — alcohol).

Elevator iceboxes.

Lazy Susan trays.

The efficient tool surrounds the housekeeper on every hand, but it depends largely on the housewife herself whether she needs it or not; whether she understands on what principles it is made; whether it is of suitable shape, design, and material for the particular purpose; whether it is comfortable to use, easy to clean, and a paying investment for her particular family; whether she takes care of it and uses it intelligently.

CHAPTER FIVE

DISPATCHING AND SCHEDULING HOUSEHOLD TASKS

THE principles of scientific management always appeal to me as so many rungs of a ladder. You mount the first rung, and then the second, and so on, ascending to the top, and each successive rung depends on having climbed the previous one and set foot on it firmly. In this new science of work we first try to "standardize" each piece of work so that we can do it in the shortest time, and with least effort — the first rung; then we find out under what general conditions it is best to do our particular piece of work — "standardized" kitchen arrangement, or rung two; next we find out the best and most efficient tool for our use, and decide to use it intelligently — rung three; and now, having the task, the conditions of work, and the right tool, the next

question is, *when* shall we do this task and use this tool?

If we had the best egg-beater, and knew just how and in how short a time we could make a cake, but tried to make it when the groceryman would interrupt us to ask the day's order, we should be wasting all our skill, because we were doing that task at the wrong time.

The logical and only possible next step after acquiring skill in our methods of work is to plan the time when we can do that work best with relation to other pieces of work. So we must schedule our tasks, that we can easily dispatch them one after another with as much ease as the Twentieth Century Limited flies from station to station on its eighteeen-hour trip from New York to Chicago.

When we standardized each of our separate tasks, we found, as I showed in Chapter II, that it took approximately so long to do each of them, and I included a short table of the time it took me to perform various home tasks under standardized conditions. Every housekeeper can make out a similar schedule of the various tasks

she must do each day, according to the number and size of her family, size of her house, and its work.

Of course my exact plan of running a house on a schedule won't fit in every household, because I have two babies, a boy of four and a baby girl of two, and, naturally, my family's needs are different from those of a family with older children, or one composed entirely of grown-ups.

In planning my schedule, I began by thinking of all the things I had to do every day, then the things I had to do but once a week or so. Then I timed just how long it took me to wash dishes, give the rooms their daily cleaning, make bread, put away the laundry, make a cake, and in fact, do every home duty. After finding out how long it took me to perform each task (without interruption) I made up both a daily and a weekly schedule.

Here is my weekly schedule:

MONDAY — Brush up after Sunday, mend soiled linen, soak clothes, market for and prepare Tuesday meals in advance.

TUESDAY — Wash clothes every other week (Mothers' Meeting on alternate Tuesday), wipe bathroom and kitchen.

WEDNESDAY — Iron clothes every other week, mend and lay away clothes, market for Thursday.

THURSDAY — Do new sewing in forenoon (Club every other Thursday), wipe bathroom.

FRIDAY — Do baking and special cooking, clean bedrooms, market for Saturday and Sunday.

SATURDAY—Clean living-rooms, bathroom, and kitchen, clean silver; generous dinner Saturday night, so only light meals Sunday.

This is a "skeleton" schedule. The washing and ironing are done by a woman who comes in on two consecutive mornings of the same week, as this plan allows for emergencies of rainy days, etc., and gives her time to clean my kitchen and bathroom — the heavy work. The week that alternates with wash week she comes one whole Saturday for a thorough cleaning. I make a point of marketing three times a week, doing the marketing for Sunday on Friday afternoon, so that I have an uninterrupted Saturday morning for work. We have our Sunday dinner on Saturday night, so that I may have Sunday an easy day.

My planning for a single day may show the idea better:

Rise 6:30 o'clock.

Breakfast 7 o'clock.

Dress little boy; scrape and carry dishes to kitchen; air beds.

Baby's bath, 7:30 A. M.; the baby naps from 9 to 10 A. M.

Wash dishes, plan meals, cook and prepare for dinner, 9 to 10 A.M. (Little boy plays on porch or in room.)

Make beds, sweep, dust, 10 to 11 A. M., while the baby is awake.

Prepare for luncheon, sew half an hour while playing with the children, 11 to 12.

Lunch with both children at noon. Leave luncheon dishes unwashed, so as to nap an hour at once with children, uninterrupted.

Dress self and children at 2 P.M.; go for walk, market, or make a call.

Home again, 5 P.M.; give children supper, start own supper. Give children bath, put them to bed at six o'clock.

Have own supper alone with father, 6:30 P. M.

Wash dishes, and while doing so prepare cereal, fruit, and the baby's gruel for the "fireless cooker." Finish about 7: 30 P.M.

Don't suppose because I plan my work very thoroughly that I am never interrupted. I am; and it is just because of the many interruptions

that every mother is subjected to that I believe we ought to plan our work more definitely, to accomplish anything between the interruptions!

Every woman with children knows the innumerable calls away from her work. I have to pick up David from his bump and "kiss it well"; or I leave the baby playing safely only to enter a short time later and find that she has mysteriously annexed the vaseline tube, and is calmly eating it, and squeezing it over herself everywhere, so that she needs a complete change of clothes: or I may find her preparing to swallow the buttons off a card, one by one, or something else equally exciting!

But you notice that I plan my most difficult work when I positively know I will be undisturbed: when the baby is asleep and the boy is playing quietly: from 9 to 10 o'clock. During this time I make a dessert, or I bake, or do any cooking which would be spoiled if I took my hand from it even for a moment. When the baby is awake, and the boy is becoming fretful and hungry, I only dust or do pick-up sewing

which would not matter if it were discontinued for a few moments.

Some of my friends laugh at what they call my "schedule babies," because their hours for sleep and food and play are quite regular. But the fact remains that babies are not such a care as some women make of them. Most normally healthy babies can be trained easily to regular habits. My babies, on "schedule" feedings, have awakened at the very minute by the clock! And, trained as mine are to go to bed early, I can hardly keep them awake later than the regular hour. Much of the excitement and fuss from so-called "restless" children is due not so much to the children as to the mothers themselves and *their* irregular habits.

I make it a rule to go out on two afternoons of a week, and then I have a young girl come in to look after the children. But any other time I want to go out I take the children with me. This condition forces me to plan my supplies and foods in such a way as never to be out of things. I could use the telephone, yes, or I could have the driver call; but I have found that

these lazy methods cause much waste and overcharge, and are one of the direct factors of the high cost of living to-day.

I take the babies out for a long airing every afternoon, and during that time I do my marketing.

The first thing I do each morning, in order to facilitate the "dispatching" of my work, is to "take stock" of my food supplies. Then having found out the state of my pantry, icebox, and larder, I plan my meals in advance. I usually plan the meals for the whole day and the next day at once, and even if there are minor changes, I am more sure of a better balanced menu, carefully considered. This planning in advance leaves no excuse for forgetting to prepare any dish I have planned, or to have the necessary ingredients in the pantry; and as I can thus see several meals ahead at a glance, I can prepare more at one period. This saves time and often a double handling of utensils. I have a separate pad or kitchen "memo" on which I jot down lists of needed supplies. I find a kitchen notebook indispensable, as through its

use and notes I have learned exact quantities of materials, and found the exact seasoning, etc., of many dishes. A kitchen calendar, with large figures, serves as a check on milkman, iceman, etc., as I mark the daily delivery of each in the square of the date.

I prepare all desserts in that morning hour, and generally all the first preparing of meats and vegetables, so that the utensils and pans used in their preparation are washed with the morning dishes when I am wearing a work dress, instead of at night when I have on a clean waist. I am a "fireless cooker" devotee because I believe it saves a tremendous amount of time generally lost in "pot-watching," not to mention saving in fuel. While washing dishes at night I start the cereal for breakfast, the baby's gruel, and such fruit as prunes, and even rice for luncheon the following noon.

Because I can't run to the store when out of every little thing — even if I approved of that slipshod plan — I buy all dry groceries and staples in quantities. Of course I save money on this wholesale buying; but I do it chiefly because

I can think of no detail in "dispatching" housework so time-losing as to have to stop all household machinery to run for a cake of soap, or to be unable to make apple sauce because there isn't a cup of sugar in the house. Many housekeepers say that buying in wholesale quantities is extravagant because when one has a large supply on hand one is apt to be careless. But this is not true. Buying in quantities saves money, saves the chance of being out of supplies, and the time lost in procuring them. I keep my excess groceries stored in a separate pantry, and regard it as a "reserve grocery store," so that there is no temptation to use them too freely.

We live in the suburbs, and every one who lives as we do knows what it is to have friends drop in on you! When they do come I dislike having to rush off to the store, as it takes time from their visit and appears as if I hadn't anything to eat generally. So I have an "emergency guest shelf." This contains such supplies as a jar of fruit, a bottle each of olives, pickles, extract of beef and malted milk, a small jar of nut meats, a can of salmon, crab meat or sar-

dines, a can of soup — all such as can be changed by any housewife into a tasty "emergency luncheon" or an impromptu tea. I never touch this shelf except for guests, and replenish it when necessary.

In a following chapter I wish to discuss methods of economical buying, and show how the housewife can be the real "purchasing agent" of her business.

Although I have written out and hung in my kitchen the above general schedule of each day's work, I often have special tasks to do, which I must squeeze in some way, and which I am apt to forget. So I have borrowed a little device from my husband's office, which is very helpful. It is called a " visible index " and is made by slipping several 3 x 5 inch filing cards — one a little higher than the other — on a small strip of metal. Each card recalls some work or special matter I must attend to, and cards may be added or removed easily.

I have done household tasks under the old way and under the new system of "dispatching," and I can unhesitatingly say that the old way

is the harder and more conducive to "nerves." I think it is not because each household task is hard that many women find themselves fatigued; but that their *work is poorly planned*— not "dispatched," so that when they come to the task they have less time for it than is necessary, and consequently they waste more energy on it in order to get it done in this hurried time.

If the reader will refer to the six factors of inefficiency in household tasks, it will be seen that several of them are directly due to poorly planned work done at the wrong time. When work is begun at a time when some other task will interrupt, the former task has to be brushed aside, and practically all the energy that went into commencing the task is lost; then, too, energy is lost merely in changing from task to task; poorly planned work results in too much changing, and hence too much wasted vitality. Again, without a definite schedule, the worker has to stop at the end of each task, and ask herself, "What shall I do next?" Just this stopping and questioning involves energy and

decisions, which it is totally unnecessary to make when a definite daily schedule is laid out.

For instance, suppose I wash my breakfast dishes, and then, without a schedule, stop and consider what I shall do? — make the beds, fill the lamps, or clean the bathroom? I have to think that all out before I can proceed, and it is probable that, in the hurried decision, I will decide to do the bathroom, when the lamps should have been the next task in point of efficiency. With a schedule there is no such hesitation and loss of energy. After finishing the dishes, I air the beds, and then I dust, and so one thing moves harmoniously into the other, and I am saved all the fatigue of making constant decisions about what I must do next.

Right here comes in the little psychological point of habit: if I never know just what task I am going to take up next, I never acquire smoothness in the way I work, either mentally or in the task itself. But working after a definite plan permits the habit of smooth work to grow, and it becomes much easier (and hence without strain) to work and do my tasks.

The working out of the proper arrangement of my kitchen is only a means to proper "dispatching" of both processes of preparing and clearing away a meal.

I did not dwell on it at that point, but if the arrangement of my model kitchen is referred to it will be seen that my kitchen is so arranged that there is a definite "dispatching" of the whole preparation of the meal. That is, I have a definite way of progressing — of "routing" materials from pantry to dining-room.

"DISPATCHING" DINNER

1. Materials taken from pantry and icebox.
2. Prepared, beaten or cleaned on board of cabinet to right of icebox.
3. Cooked on stove to right of cabinet.
4. Laid on serving table (on platters and dishes) to right of stove.
5. Piled on wheeltray and sent at once to table in dining-room.
6. Soiled utensils put to soak; table straightened; needless materials and utensils laid away.

RETURN "DISPATCHING"

1. Soiled dishes placed on tray and wheeled to sink-table to right of sink.

2. Left-over foods placed in pantry or icebox.
3. Dishes washed; pans and utensils washed; laid on shelves to left of sink.

Successful dispatching of work depends definitely on the proper arrangement of larger equipment, as in the kitchen, and of proper arrangement of all needed utensils and food materials; it depends on having a definite place for every utensil or tool so that no time is lost looking for things; all materials must be at hand before the work is begun; and it consists particularly in grouping processes that are related, and doing them together, rather than doing first one portion of a task, stopping, and commencing some unrelated portion.

This latter point in dispatching is clearly shown in the methods used in sewing.

I make my children's clothes, although I buy my own clothing ready made. I can't afford a really good dressmaker. Mothers have little time for "fittings" anyway. But I economize on the babies' outfits because I find that well-made garments for little tots are higher priced, proportionally, than those for grown-ups. I

make use of the principle of "dispatching" my sewing, just as they do in a garment factory. My plan is something like this:

I buy in as large quantities as possible, choosing such materials as will be suitable for both children, as gingham, Indian Head, unbleached linen, etc. This plan would be very good for a family of three or four children where the garments could be made of similar material, each rendered individual by different trimming.

I purchase all thread, pins, and buttons in quantities, and stick to similar patterns in buttons, so there will be fewer replacements. Bias lawn binding is one of my staples for finishing strongly and quickly.

Before beginning work I see that the machine is oiled, that the proper needles are inserted, and that my pattern, materials, inch measure, and all findings are at hand.

Next I cut everything of one kind at once: six rompers, three petticoats, or whatever I am making.

In stitching I do first the back seams, or any pieces requiring buttonholes, so that they may be picked up later in odd moments when I am watching the babies, talking to callers, etc.

Then I stitch on the machine everything that can be run without basting, turning, or hand pressing.

I turn French seams, sleeves, or whatever can be stitched without basting or gathering, and run them on the machine.

I baste right through the pile, at one sitting, all hems, sleeve-facings, etc.

I stitch through the same pile at once.

I do hand finishing at odd times when watching the babies, or I leave it for Aunt Bertha when she comes to spend the day and wants to help me a bit.

I put trimming on by machine; or more frequently by hand, as I prefer to do it by hand while caring for the babies, rather than sit a longer time at the machine.

I know that some mothers will rise up and say that it is too much for them to say how or when they will do any part of the sewing, and that they can make a better dinner than I without dispatching it step by step. I do not doubt that they will sew as well or better, and serve a more successful dinner; the object of "dispatching" is not the quality of the product so much as the ease, and reduced labour with which any process is effected. I have been served the most perfect dinners, and yet, through improperly arranged equipment, and no definite plan of work, the hostess was all "tired out" before the meal began, and was not able to enjoy her own delicious cooking.

Some women may also say that because I do sewing and other tasks in this apparently formal manner, that I am reducing them to bare mechanical processes, and robbing them of

their beauty and that "home touch" which has been praised for ages. That is just what I do not do. I put into them all the inspiration and love which any task must receive to be other than mere factory work. So many women say, "I don't want to run my home like an office or a factory. I want it to be a *home*. I hate system and methods, and all this efficiency idea seems to be too mechanical and formal for me to follow."

But these same women and hosts of others are continually talking about home drudgery. If they have been doing all these home tasks all the centuries in such a beautiful and poetic way, why is it that women are fleeing from housework to professions and outside work? Why are they living lazily in coöperative apartments, eating delicatessen meals, and refusing to assume the burdens of motherhood?

"Motherliness" and "hominess" in the past usually have meant drudgery. True and better homemaking will come from a higher realization of the tremendous possibilities of the homemaker who uses scientific methods instead of

rule-of-thumb. If housework is drudgery to a woman it is only because that woman refuses to accept the efficient methods and improved equipment offered her on every hand. It is just as stimulating to bake a sponge cake on a six-minute schedule as it is to monotonously address envelopes for three hours in a downtown office: it is just as interesting and as great a test of cleverness to "dispatch" a six-course dinner as it is to make hammered brass or teach a graded school. Housework, the science of home-making and motherhood, if followed out on an efficient plan, can be the most glorious career open to any woman — one that will not stultify nor degrade, but which offers her peculiar talents their widest and most varied scope.

CHAPTER SIX

THE HOUSEWIFE AS PURCHASING AGENT

FIFTY years ago about 68 per cent. of the population of America lived in the country; most of the industries of meat-curing, canning, or "jarring," the making of clothing, soap, and textiles were carried on within the home. The housewife supplied with her own hands the bulk of what her family ate, used, or wore.

At the present day these conditions are reversed, and about 65 per cent. of our people are congested in cities; the "food factory" has taken the place of home canning and food preparation; meat-curing is in the hands of the packers; the manufacture of ready-made clothing is astounding in its extent; even the milk and egg supply is handled by scientific dairies and the commission man.

With these changes in the economic handling

of the needs of the home has come an immense change in our standards of living. Times are "easier," more luxuries are manufactured and widely distributed among the bulk of the people. Our menu offers more variety, many canned delicacies are now seen on every table, and it is difficult to distinguish the shopgirl from the woman of means by dress alone.

Since industry has become specialized, and all the tasks of which woman has been the guardian in the home for ages have been taken out of her hands, it would seem as if the modern housewife is bereft of her occupations, and that she no longer is responsible for her family's needs. But a closer examination of the facts reveals that the modern housewife has been forced by these industrial and economic changes into even a more responsible position, that of spender and buyer — she has become the purchasing agent of the home and of society. It took manual labour and skill to supply the needs of her family with her own hands fifty years ago; but it takes more *thought and intelligence* to purchase for the needs of

her family by wise expenditure at the present day.

Buying is a science, and like any other science it is based on knowledge. In becoming the purchasing agent of her family the modern housewife must *know*. First she must know real values in life and decide what standards she wishes her family to maintain. It is true that false standards of living, with extravagance in dress, food, and shelter, are to blame for much of our modern ills. Families whose incomes do not warrant it ape the manners and amusements and furnishings of others, and are often led into debt or speculation in order to maintain this fictitious mode of life. It rests with the homemaker to decide for a simple, sincere standard of living. Then, with this standard fixed in mind, she can more satisfactorily expend wisely and successfully for the various items of her family's needs.

Food is the largest item in the family budget. As purchasing agent the housewife must know food values, and what foods possess these values. Something of the principles of nutrition, and

the part each kind of food plays in building the human body, should be hers. If she does not know that round steak at 20 cents a pound possesses as much nutriment as the porterhouse at 26 cents, she will not expend wisely or economically. She should know something of the idea of a "balanced meal," and what foods will give it; the place of milk, fruit, and eggs in the diet; what are healthful meat substitutes, and the nourishment of various kinds of breads, vegetables, and cereals. This knowledge will enable her to buy foods intelligently, so that her family can be well nourished with a varied diet at a moderate expense. "Competent counsel" for the housewife in this matter can be found in the pages of the best women's publications, which retain experts in domestic science to show her how to cook and market economically, and in the so-called Farmers' Bulletins, like Nos. 391 142, 128, sent free from the Department of Agriculture, Washington, D. C.

The next largest item in the budget is clothing. I think that while many even inexperienced women are intelligent on food matters,

a greater number are unskilled in a knowledge of textiles, and how to buy them. The purchasing agent for her family's clothing will know what materials wear best for certain purposes; what colours will fade; how to tell woollen from "shoddy"; how to buy flannels for the baby, stockings and shoes for the boy; why there is not such a fabric as "linen suiting" at 15 cents a yard; how to tell if silk is weighted; if excess starch has been used as a filler; if the material has imperfections in the weave; how to estimate the "all-wool" dress goods before she buys; and by a hundred details arm herself with accurate knowledge, so that in this matter of textiles she may clothe her family with materials and garments that will wash, hold their shape and not fade.

In the choice of furnishings the housewife has a great opportunity for wise buying. We in America seem to possess a mania for a profusion of furnishings, utensils, and bric-à-brac. The wise housewife will know that the fewer the furnishings the less the work devolving upon her; that one or two well-made pieces of

furniture are to be preferred to a suite of cheap quality; that utensils must be chosen for their wearing quality, shape, and ease in cleaning; that ornaments should be few, and of simple lines. Too much money is wasted in buying poorly made small articles which have neither use, nor beauty, but which only cause disorder and require care. In the buying of furnishings, the housewife must regard only the essentials, and reject unsatisfactory, poorly made, or a profusion of objects and furnishings.

Fifty years ago the housewife who made apple butter was sure that it was pure and clean, because it was made in her own kitchen. To-day the housewife will have to read the label on her apple butter to see that it is not artificially coloured, prepared with glucose, and made in some factory where unsanitary conditions prevail. Thus a new responsibility in the buying of foods confronts the home purchasing agent: she must be sure of the excellence and purity of the manufactured brands she buys; she must read the labels and weights marked on the packages she purchases; she must demand that

her packages and all goods are true to weight or measure so that she does not suffer from the modern "short-weight" evil which steals the pennies from her pocket. In short, she must protect herself and family by every means against adulteration, fraud, short-weight, and unsanitary handling of food products.

No efficient housewife will be without a set of standard measures and a scale in her own kitchen upon which she can weigh all goods after delivery; she can closely watch the dealers as they weigh articles before her; she can demand, if she knows the weight and measure laws of her state, that her bushel of potatoes be a definite number of pounds, and not merely a "bag" of potatoes; and that other food products conform to certain legal standards, which, however, local dealers do not always observe; she can examine the various "quart" bottles, to see if they measure true, or whether a little ingrowing bulb of glass at the bottom does not rob them of several gills; all package goods should be weighed, to see if they are net weight or not, and to determine if the difference in

price of the package and bulk article of the same kind is warranted by the increased cleanliness of the former; the "trimmings" should be courteously required of the butcher, and the bone from the mutton roast for which she paid 22 cents a pound; in all weighing and measuring, let the housewife remember that its purpose is not as much to *detect* dishonesty, as to *encourage* honesty.

A strenuous campaign is constantly being waged for purity in our canned and manufactured food products, by numbers of organized workers, and by groups of housewives all over the country. The reputable manufacturers are banded with them in this purpose; but it is also true that many unscrupulous manufacturers are desirous of palming off products made under unsanitary conditions, and prepared with preservatives. "*Read the label*" should be the housewife's slogan. Notice particularly the *fine print:* "Prepared with benzoate of soda," or "contains salicylic acid," "artificially coloured"; or the words "sulphate of copper," or, particularly, the word "*compound*," which

always means adulteration. In articles like jellies, pickles, and catsups, watch for the use of substitute sugars and preservatives; in flavouring extracts watch for artificial flavours of acetanilid, or ethyl, in prepared jelly powders and candies beware of coal-tar dyes; ground spices are adulterated with starch and plaster; canned peas and beans are frequently coloured with sulphate of copper.

The housewife's weapon against impurity in manufactured goods is to accept only known and well-advertised brands of the goods she needs. Do not ask for "a can of tomatoes," but ask for a brand whose manufacturer is backing his product by the expenditure of millions of dollars, because he knows it is pure, and who will give you the "money-back guarantee" if you are not satisfied.

It is the largest manufacturers of standard, well-advertised articles who are on the right side of the food fence, and who are working with the housewife for better food conditions, and who could not afford to put out an inferior article, because their whole reputation is at stake.

It is the small unknown maker who is afraid to put his name on a can of tomatoes, and say it is "Smith's tomatoes"; instead he calls it the "Peerless," or something like that, and will put out an unworthy product not bearing his name because you can't reach him if the product is unsatisfactory. The housewife must support the best manufacturers if she wants to encourage reliability, honesty, and purity in manufactured food products.

Then the purchasing agent will see that the goods she buys are made and sold under sanitary conditions. Nutmeats which are picked out by the children of Italians in a dark tenement where the family washing is done alongside the table will not be fit food for her family; children's clothes, made in similar tenements, under conditions of filth, are not fit for her children to wear. Buy from a reputable firm, and insist on the label on the inside of ready-made clothes stating that the garment has been made under sanitary conditions. Demand that your grocer keep his butter and cheese under glass, and that the clerk doesn't

sweep out the store when the crackers are lying open; insist that butchers have netting over the meat, and that such a thing as "loose milk" shall be unknown in your community, and that only wrapped bread be delivered by the driver who also takes care of his horse.

The buying of this modern purchasing agent will not be haphazard and slipshod. Besides insisting on all the points of weight, sanitation, and purity, the housewife will estimate carefully what the needs of her family will be for a given time. She will know that it is more economical to buy in quantities, if the quantity is based on actual estimate. Laundry soap costs 5 cents a bar singly, but comes seven bars or six bars for 25 cents, or a saving of nearly 10 to 15 cents on a dozen bars, besides the saving that comes from having the soap harden well before use. I know I use so many cans of vegetables or fruits a month, so I order by the dozen and make a saving of 3 or 4 cents on each can. I have worked out for my family some simple estimate of the time various articles last me, and with this fairly accurate list, I can buy more intelligently and

economically, often making a large order on which the grocer will give me a generous cash discount.

SUPPLIES LASTING A FAMILY OF FOUR —
(TWO ADULTS — TWO CHILDREN)

ARTICLE	QUANTITY	TIME
Coffee	½ Pound	1 Week
Tea	¼ Pound	1 Week
Sugar	4 Pounds	1 Week
Flour	3½ Pounds	1 Week
Cornstarch	1 Package	2 Weeks
Cereal	3 Packages	1 Week
Rice	1 Pound	1 Week
Spaghetti	½ Pound	Each Meal
Cocoa	½-Pound Box	3 Weeks
Canned Fruit	2 Cans	1 Week
Canned Vegetables	2 Cans	1 Week
Tapioca	1 Package	1 Week
Butter	2½ or 3 Pounds	1 Week
Lard	1 Pound	2 Weeks
Potatoes (in winter)	1 Bushel	1 Month
Soap, Laundry	2 Cakes	1 Week
Soap, Toilet	2 Cakes	1 Month
Salmon	2 Cans	1 Month
Sardines	2 Cans	1 Month
Codfish Flakes or Crab Meat	2 Cans	1 Month

With this quite approximate list before me I can very accurately make out orders and save considerably.

Finally, the purchasing agent will use intelligent care in the storage of her supplies, once she has bought them. She will know at what temperatures best to store her vegetables and fruit; that flour and other cereals should be in a cool place; that raisins and cocoanut shrivel when opened; that heat germinates weevils and other pests; that canned goods should be emptied as soon as opened; that the excellence of many package goods is destroyed by the careless way in which they are left exposed to dirt and air.

The modern housewife will realize that the burden of supplying her family has not been taken out of her hand by modern industrial conditions; but that, instead, in becoming the purchasing agent of her family and society, she has larger responsibilities calling for trained intelligence, knowledge, and constant vigilance.

CHAPTER SEVEN

EFFICIENT MANAGEMENT OF HOUSEHOLD FINANCES

I HAVE for some time been connected with a large women's publication to correspond with their readers on home matters, answering questions of new methods of work, new devices and tools for the home, and helping, if I could, to solve the "perplexing problems" of my many correspondents. The question which was put to me the greatest number of times was not how should they do housework, or what tool should they use, but *how could they manage their household finances!*

Time and again I have received long letters asking for detailed help, telling the income, the number in the family, what must be paid for rent, what they wished to save, and ending with, "Won't you please tell me how to manage better?"

This question of the management of the household finances is the most vital in the running of the home, and is often deeply concerned in the happy relation of husband and wife. This is the one point in which the husband and wife must "pull together." No really successful management of the home can result if both husband and wife do not equally and mutually agree as to the distribution of their finances. The homemaker must understand definitely what the income is; the income-earner must know definitely how that income is disbursed, and both of them must have the same standards in view, and the same ideal or motive toward which to save.

It is impossible to achieve economy and success if the wife is saving in her distribution of the income, while the husband spends an undue share on personal extravagance; vice versa, it is impossible for a husband to save and attain business success with a wife who spends foolishly. The first step, then, is for both parties to clearly understand the ideals toward which they are working, and to mutually agree upon

their standards of living, and what they can afford to expend for each item of the family budget.

In examining the family budget we find it must include such expenses as shelter, food, clothes, and a large group of operating expenses like service, fuel, carfare, telephone, stationery; it must also cover emergencies like doctor and sickness, and the item of savings, which may be insurance, or payments on property. The per cent. of the income which must be given to each of these items varies with the income, but the general figures of rent 20 per cent., food 25 per cent., clothes 20 per cent., 15 per cent., for operating expenses and 20 per cent. for savings, charity, and the "higher life," is an accepted division on a salary of $1000–$2000.

It is an excellent plan, therefore, to make up in advance a family "budget," apportioning the income roughly for each item, depending on the salary, social station, size of family, etc., etc., of the particular case. After apportioning the income in this way, both parties should insist on keeping within these figures. Now just how

shall this be done, and how can this "budget" be estimated in the first place?

No person can estimate the cost of running any business unless he has figures and receipts and cash records on which to base it. No person can approximate the expenditure of one year until he has the figures of the expenditure of the previous year on which to base it. It is necessary at the outset of running any business — in this case the home — to keep records of income received and income expended, so that an estimate for the following year can be made, and a more just understanding be had of all expenditure, and the items on which it was made.

It is not difficult, but very simple, to "keep accounts" in some form. For the beginner I suggest that a small ruled account book be purchased (costing from 25 to 75 cents) which has spaces for such general items as meat, groceries, fuel, laundry, service, amusements, etc., and spaces for cash received, cash expended, and a balance column. This book has a double-page of these columns for each month, a line for each day.

First save all sales-slips, receipted bills, and, when shopping, jot down on your memoranda the cost of each general item, such as fruit. It is not necessary to say, "cauliflower, 20 cents," "onions 1 cent" — merely the total of that item, fruit. Then every other day, or the same day if convenient, enter these small amounts in the proper column in your book. Ice or milk bills paid weekly, rent or insurance paid monthly, should all be entered in the proper column; it is sometimes better to lump items under "stationery," or to credit the father with a lump sum which must cover his carfare, lunch, and incidentals. At the end of every week it should be convenient to total the columns, and make a balance; or in many cases it is just as efficient to total the expenses only monthly, depending greatly on whether the bills are paid often, or at the end of the month. This total amount of expenditure, subtracted from the cash received at the beginning of the month, should equal the cash on hand at the end of the month — and the hard task of "keeping accounts" is performed. The surplus each month may be cred-

ited to the following month, or put toward a savings or sinking fund for emergency use. Keeping accounts in this form brings to light several points:

It will tell you just what you spent every penny for;

It will compare two items for you at a glance, and you can see if it is the "meat" or the "grocery" item that is pulling up your bills;

It will compare any one item with the total expense, so that you can determine whether you are not spending too much for this item, as compared with your whole income;

It will tell you what items are your biggest drain;

It will compare all the items this month with the same items last month, so that you can instantly find out the cause of any increase or change;

It will tell you the "average" of each item of your expense, month by month, so that you can quite exactly estimate the steady "average" of any of the regular "operating expense," and can thus accurately estimate your next "budget";

It will show you just where you can retrench easiest;

It will show where small "leaks" are in your business, that you never suspected;

It will tell you anything you want to know about your home, if you keep it accurately, and allow it to do so.

I hear some woman say, "Oh, but my husband pays the lodge and the insurance and the

rent, and I pay the food and clothes, and house expenses, and won't that confuse keeping the account?" Certainly not; it happens that you, the homemaker, are keeping the account, because it is more convenient to do so; but items that the husband spends should be written in the account book as well as those spent by the wife. "My husband won't take care of every little penny," says another. Then mutually arrange that he shall take a certain sum each week or month for his carfare, lunch, and incidentals, and put that sum on the book and let the few remaining pennies be unitemized.

"But I get an allowance to run the house on, and have to pay for my clothes from this," writes another. Personally I am much opposed to any kind of allowance system for either the homemaker or the wage-earner. The business of homemaking is too big and splendid between two big and splendid persons to be subject to any petty allowance system. I regard running the home as I regard running any business—with the wage-earner as senior partner, and the homemaker as junior partner. Both must have

the same ideals of what they are running that business for, and what they wish to save. They must both mutually decide how much they are going to spend, and for what they are going to spend it. The income should be considered as a common fund, from which either and both may draw out necessary funds for current expenses in a dignified way. The surplus, after both have supplied their common needs, should be placed in some form of savings or "sinking" fund toward the proverbial rainy day, and for use when the ordinary salary is not sufficient, as at times when there is a heavy drain of buying clothes for winter. If the wife needs money for personal use, let her take it from their common income; if the husband has needs, let him draw on the common income. What could be simpler? Why should there arise any complications, if both think enough of each other, and keenly feel the aims to which they are both striving?

If I am keenly interested in saving for a piece of property — which I shall share — why should I spend foolishly on myself? If my husband is eager to start an educational fund for our chil-

dren, will he fritter his money away on personal luxuries?

The reason that I am so opposed to a personal "allowance" for the wife is that I cannot imagine any business in which the senior partner would hand a small lump of money to the junior partner and say, "Here, John, is some money for you; get some togs with it." Such an attitude would be undignified and compromising. The junior partner, like the senior partner, has a *right* to draw on the business for his needful expenditures; and neither partner will be selfish if they think of the business — the home — and what they want to do for it. That is why there is no stimulus so great, or a tie that binds both partners together more closely, than a common object, like paying for a home, a piece of property, making a school fund, or other common purpose. I have not entered into a detailed discussion of the "budget" because it has been discussed and thrashed out on every side. The needs of every family vary because of locality, profession, and social standards, so that it is always a matter of the individual case. A par-

ticular budget depends on a particular family, and the experience of other families can only be taken as suggestions. Every family must decide the divisions of its income for its particular needs. The question is, how little can I spend and still live comfortably? "Account keeping," and the other suggestions I have given will assist, no matter what the family be in size, or standards or locality.

In managing her finances in a scientific way, the homemaker will, first, keep account of her expenditures; she will pay cash, as cash is cheapest, and bills which are allowed to hang develop errors which cannot be rectified with the ease that they can be detected in a weekly bill; she will check up all bills carefully, to avoid error: she will keep receipts in accurate form, and all important receipts for a year at least; she will live on less than her income, and save, in partnership with her husband, for a common object; she will not incur debt, or buy "on time," where she would have to pay an inflated value, and where it is morally

weakening to use an article for which she has not paid.

In the chapter on "Reliable Records," I wish to show how these accounts and receipts may be kept in a convenient and compact form, to which the homemaker can readily refer.

CHAPTER EIGHT

RELIABLE RECORDS IN THE HOUSEHOLD

How will it be possible for the homemaker to develop the next rung in the principle of efficiency — that of "adequate," "immediate," and "reliable" records?

I am not a business woman, but I have always been impressed by the system and orderliness with which business men preserve their data and information. Rows of filing cabinets, indexed tabs, drawers of little cards on which is written what, when, and how much John Jones bought or sold; large, roomy envelopes for clippings, binders and folders of different styles — how very well and how carefully the "records" of every office, factory, and store are kept, so that the needed information can be brought to hand at once. This information may be the memoranda of a sale of goods, or an order to the

shipping clerk, or the receipt for thousands of dollars' worth of raw material. If the president needs it, there the original paper lies in the record file; and probably there are six or more carbons of the original paper (in many cases) which six other persons have in their files as duplicates. The record is "adequate" of the matter in hand; it is, we suppose, a true or "reliable" statement of the facts, and, most important, it is "immediate" because it is in just the *right place*, and the place where every party concerned expects it to be.

In considering my home as a business, I found that I, too, had records which I should make, "reliable," "accurate," and "immediate." There were sales checks from the butcher, gas and electric receipts, cards of professional tradespeople, addresses of my friends. How should I take care of them in an efficient manner?

I dislike "system" as much as any woman born, and the last thing I really am is a "system fiend." But I found finally I just couldn't afford to waste the time and nervous force usually spent in putting away, hunting for and

hauling things out of corners to find just the right thing.

I used to keep accounts in one book and addresses in another book, and I pasted recipes here and there and kept clippings poked away in my desk. I tried it out in this slipshod manner for some time and then I gave it up. I decided that if my husband and other men used modern filing systems and cards in their offices I could do the same in my business of homemaking.

I finally worked out what my husband calls my "time-and-worry-saving family cabinet." I bought a drawer, illustrated herewith, of 3 by 5 inch filing cards. The drawer will hold a thousand cards costing about 75 cents. I divided the cards under subheads which I will classify later, and which, of course, must depend upon the needs of the family. I keep this drawer on the top of my desk, where I can use it every day, and when you see how much information is packed away into that little drawer fifteen inches long I think you will be surprised.

"Isn't this card filing really very fussy?" asked a friend of mine one day. "Doesn't it

take too long to write everything down in such detail?"

I asked her this: "Does it take as long to write on a card that David's red woollen cap, sweater, and mittens are in the package at the bottom-right of the cedar chest, as it does to pull out all the other bundles first and have to pin them back, or else forget that you put them in the chest at all, and have to look in one trunk, three closets, and a window-seat before you remember that they were in the chest after all?"

Now my filing system, or any other systematic and accurate method of keeping home records, saves motion, time, and money.

I believe in account books as far as they go, and it certainly is better to keep accounts in book form rather than not at all. Only notice that bound books are never ruled just to suit your needs. Then when one book is filled you have to buy another.

With cards there is no such thing. If you "muss up" something you simply throw the card away without spoiling a whole page. And you don't have to write very fine or use a large

book. With these cards you simply take out the card of the particular class of thing you want and write on it. You may need several cards for one class, or only one, and you can keep adding as much as you wish. A card system expands exactly with your needs, and there is no renewal.

Then think of the many kinds of things you can keep record of in one place. You think you put the address of that dyeing concern in the "red" memorandum book, but you really put it in the "black" memorandum book; and you don't find it out until you have looked through the "red" book twice and worried for fear you'd lost it!

Let me give you the separate divisions of the drawer as I have arranged it. Your needs may not be so large, but on the other hand they may be much larger. This is the cabinet in detail, and just see what an all-round servant I make of it:

1. HOUSEHOLD ACCOUNTS

Subdivided by months, and with a yearly "recapitulation." Separate cards for "Meats," "Groceries," "Drugs," "Personal," etc., and for each of the children.

2. HOUSEHOLD RECORDS

A — Family Sizes Record (shoes, hosiery, gloves, etc.)
B — Clothes Storage Record
C — Linen Record (number, cost, price and date of purchase)
D — Preserve Record
E — Pantry Record
F — Anniversary Record
G — Gift Record

3. LIBRARY RECORDS

A — Poetry
B — Fiction
C — History
D — Reference
E — Books to Read or to Buy
F — Music, Repertoire, Lyric, Humorous, Sacred
G — Music to Buy

4. FAMILY MEDICAL RECORD

A — Physician B — Dentist C — Oculist

5. RECORD OF ADDRESSES

A — Social B — Professional C — Special

6. HOUSE HINTS DIVISION

A — Toilet and Laundry Hints
B — Baby Hygiene
C — Garden and Flower Hints
D — Entertainment Suggestions
E — Jokes, Quotations, etc.

7. HOME FINANCIAL RECORDS

A — Taxes, Real Estate
B — Document Record
C — Bank Records
D — Bills Receivable
E — Bills Payable
F — Personal Financial Records, Club Dues, etc.

8. GENERAL INVENTORY

Subdivided for Clothes, Furniture, Jewellery, Silver, Miscellaneous, etc.

First I will take up the accounts. Under every month's subdivision there is a set of plain, ruled 3 by 5 inch cards. In my system they number fourteen. They are as follows:

1. Groceries
2. Meats
3. Vegetables and Fruit
4. Bread, Milk
5. Ice, Cleansers
6. Service
7. Laundry, Soap, Starch, Bluing
8. Fuel, Gas, Electricity
9. Furnishings and Repairs
10. Medical and Drugs
11. Church, Charity
12. Amusement, Carfares
13. Cash Record
14. Recapitulation

These fourteen cards are my working records of receipts and expenditures. When you see two subjects like "Bread" and "Milk" on the same card, that means that there is room for both on the one card. When I make an expenditure under any of these heads I simply put down the date and the amount. Every two days or so I take the receipts and sales checks from the bill-hook in the kitchen and copy the totals on the cards. Receipts for gas, rent, milk, etc., I file in

a vertical letter-file having an alphabetical index, which can be bought for 35 cents, and which is the simplest device to file receipts accurately. After the month is over all that is necessary is to do my adding up and enter the totals for each division on my recapitulation card, so that I have a compact and handy record of what I spent on any item during any month.

My first division under "Household Records" is that of "Family Sizes Record." Under this head I have cards on which I have written the sizes of my husband's socks and gloves, his neckband, shoes, etc. On my own card I have my waist, hose, corset, glove, and underwear measures. I also have a card for each child. When I go shopping I fasten a clip on the cards and take them in my bag, equipped against mistakes. It used to be exasperating to notice, for instance, some good underpriced socks, and then fail to remember my husband's size. Or to see cheap sandals for the children and not be able to recall whether the boy wears a 6B or a 7B.

Then comes the "Clothes Storage Record." When I lay away winter or summer garments

and bedding I make out a card reading, perhaps, like this: "David — three union suits; do next season; box left lowest corner cedar chest"; and when the time comes to use the things they are found instantly, without my having to root around hopelessly and say: "Why, I'm sure I put them right there." So often we women lay away a half-worn waist, intending to make it over, and when we find time we can't find the waist, and we go around saying: "Where did I stuff that old pongee waist with the eyelet embroidery?" But not so with a "Clothes Storage Record"!

My "Linen Record" is most practical and money-saving because of its check upon the laundress or laundryman. On the cards I mark the sizes, cost and date of purchase of each class and give each piece a separate number; A, means large sheet; B, medium size; C, crib sheet. I mark the letter and the date on each piece with indelible ink. Under the picture of the cabinet is shown an actual card. The other day a laundry to which I had sent a special crib sheet lost it and disputed the matter. I handed them

my duplicate list and showed that the number of the missing piece corresponded with the entry on my card: "C — 8 — June, 1910." To my surprise, instead of resenting it, the driver said: "I wish more women would do it that way." The record also enables me to judge the length of wear of the pieces and whether I should buy the same quality again or not.

I have a "Preserve Record." I remember how exasperated I used to be when I ran for a can of peaches and found there wasn't another can left. Now I keep a record and know just what I have. So many cans of strawberry, peach, quince. So many glasses of currant, apple, and crabapple. My daily kitchen memo-pad checks them as I use them, and these memos are later transferred to the cards.

On the cards in my "Pantry Record" I have written the time certain quantities of supplies last me, as, "Sugar — four pounds a week," etc.

I am very likely to forget a date, and there are some dates we none of us like to forget, such as anniversaries and birthdays. So I put them all

down in black and white on cards. Some of my friends wonder how I manage to remember their birthdays, and they give me a reputation for thoughtfulness which belongs to my faithful card cabinet!

I started my "Gift Record" when a friend sent me a duplicate present. I keep in the record all the names of those I want to remember and what I gave them last time. We are giving my husband's younger sister, for example, a piece of silver each year for a silver-chest, and you see how helpful it is to know just what other pieces I have already sent her.

We classify our books on the cards in my "Library Records" under poetry, fiction, etc. Each book is on a separate card, and if somebody borrows the book we put down name, adddress, and date on the book's card. Our "Library Record" includes music, because I play the piano and my husband sings. So I made out cards of all the music we own, under two heads, "Vocal" and "Instrumental." When we want to sing all we need to do is to go over to the card index and make out our programme, without

pawing over the music itself, and the cards at once suggest the pieces we want. Each piece is numbered on the card to correspond with a number in heavy blue pencil on the cover of the music, close to the binding edge; so that in searching through the pile we don't have to yank and pull and mix up the sheets to identify a particular song; we simply look for the number. Music-roll records are kept in the same manner.

In both book and music classifications we have a card for books and music we wish to buy. Before we had such a card, many times, when some one would tell us of a "good song" or a fine book we should read or have, my husband or I wrote the title down on a slip of paper which promptly disappeared. Now we simply get out one of the cards and down it goes.

Our "Family Medical Record" I am particularly proud of, and so is our family doctor. He thinks it an idea that ought to be widely in use. We have three classifications: "Physician," "Dentist," "Oculist." Under "Physi-

cian" we have a card for every one in the family. My boy's card reads:

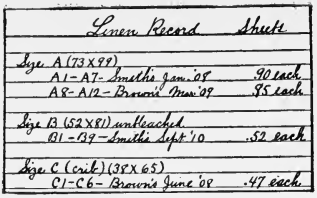
Vaccination (with vaccination certificate)	August, 1910
Measles	January, 1911
Adenoids removed	April, 1912

In any illness a physician asks first about previous health and attacks of sickness; schools require information on these points — all of which questions are usually answered by the mother in an indefinite way.

Under "Dentist" we also have a separate card for each member of the family. On the back of each card is a "tooth chart," which every dentist has in abundance. The dentist marks on this what he does to the teeth, and we can look at our charts, and see when that aching tooth was last filled.

On the "Oculist" card is the prescription for my glasses, the date of the last eye-testing and what each lens cost.

What I should do if I had to depend on the old way of keeping addresses in "address books" I surely don't know. Not long ago I searched an



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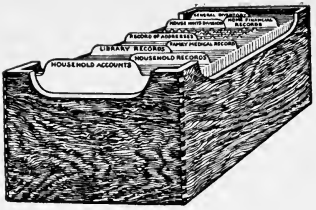

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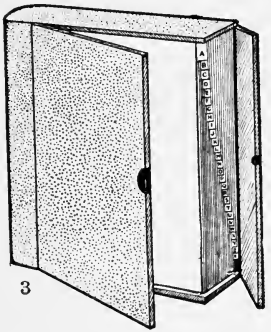

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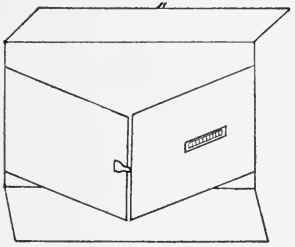

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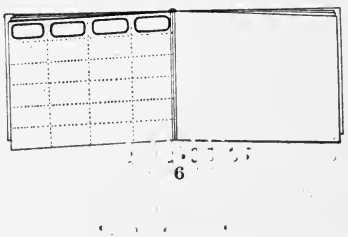


6

BUSINESSLIKE EQUIPMENT FOR THE HOME

(1) Sample Card from the Home Record Cabinet
(2) The Time and Worry Saving Home Record Cabinet
(3) A Vertical Letter File for Receipts
(4) A Tickler Which Reminds the Busy Housewife
(5) A Vertical Filing Envelope for Saving Large Clippings
(6) A Book of Handy Labels for Home Use

old address book, only to find that several friends had since removed to new streets, that two had passed away and three had married. Now I have an alphabetical index and put each name on a card and file it under its proper letter. When names change, as when one of my friends marries, I simply throw out the card and make a new one. I have one division for names of friends and another for names of tradespeople and for business cards of blanket cleaners, dyers, dentists, etc.

The cards in my "House Hints" subdivisions I use as much as or more than any other and find them exceedingly helpful. You know how often we read a good toilet or laundry suggestion in a magazine and mean to save it. Or we do cut it out but forget where we put it. When I see a recipe for a massage lotion or something of that kind it goes straight on a card which I can't lose. Helpful ideas on baby hygiene or diet are filed the same way.

Under another division I file bits of poetry, stories and quotations which I should not like to forget. I find this last becoming of more in-

terest and value; and once, when some of my friends were to dinner and everybody ran out of stories and witticisms, I made much fun by bringing forth my "system," which they all agreed to be "a gold mine of the right stuff." I haven't heard the last of my "entertainment by card system" yet! Some of the clippings on all the subjects are too large for such a small card, so I have them filed in a set of large envelope folders which my husband brought from the office for me. I also file hints on "entertainment" and games in these folders.

My husband attends to the "Home Financial Records." Under this head we keep a record of the valuable documents we have, such as deeds, stock certificates, etc. The documents themselves are in a safe downtown, where all valuable papers should be kept; but we have a list of what they are at home, so that in case of accident to my husband I shall be able to know exactly what condition his affairs are in. A lawyer has told us that this section of the cabinet is one of the most sensible ideas he ever came across. He says that no end of delay and difficulty fre-

quently attends the settling of a man's affairs in case of accident, just because his family doesn't know accurately of their condition. A card under "Taxes, Real Estate," tells when taxes are due, when paid; a card for insurance, a card for house lease, a card giving our payments on a small piece of property we hope to own some day, tell us at a moment's notice all we want to know about our financial affairs.

The last division is "General Inventory," subdivided for furniture, silver, jewellery, etc. Such a list is only a common-sense protection for any family and is an accurate statement which is of immense value in case of theft or fire, as insurance companies compel a listing of the goods they are asked to be responsible for. People really have more things than they are aware of and often do not know their value until it is put down in cold figures. We keep a duplicate card of the inventory with the documents downtown in the safe, so that there will be another copy undestroyed even if this box should be burned.

And all this information is contained in a fifteen-inch box!

Besides my "cabinet box" I have worked out one or two helpful points in the way of simple records which I think every woman might adopt with profit to herself. For instance, when I fill a chest or a storage box with clothing, etc., besides labelling each bundle that goes into the chest or box I make a rough chart of the inside of the receptacle, so that I can put my hand on any desired article at once without disturbing the others.

Again, on the inside of my medicine-chest door I have written, for emergency's sake, a list of the chief accidents and poisonings that are liable to occur in a family, and their treatments. On each bottle I write the date of purchase. Every six months I overhaul the cabinet and throw away medicines antedating that period, as I believe it is dangerous to take stale medicines which may have deteriorated from age and exposure.

I have also labelled the drawers of the chiffonier that holds the children's clothes. I found that I was always opening the wrong drawers.

So I pasted neat labels, "David's Underwear," "Jean's Rompers," etc., on the drawers, and find it saves time for me, and especially for a stranger or nurse who might be called in to take care of the house for a brief period. Such occasions are bound to occur in every home at some time, no matter how much care is exercised by the members of the family, and I always think of this and try to have my home in such order that it would run smoothly even without my hand at the helm. That is why I label my linen shelves, the pantry shelves, laundry, etc., so that it would facilitate laying away linen and supplies by a stranger or a maid.

Some women who do a great deal of sewing may find it very helpful to use a pasteboard box or some other receptacle or drawer for neatly and systematically filing away their paper patterns, instead of using the usual haphazard "pattern bag." Pasteboard "guides" on which the subjects may be written (such as "Waists," "Aprons," etc.) will be found convenient to classify them quickly, and will save time, temper and expense.

Every woman can very readily adapt these ideas to her own needs and develop filing systems of her own. I know that any woman who has once felt the comfort, satisfaction and pride that come from the use of a systematic filing method will never return to the slipshod ways of the past.

Many women will say that it is not "interesting" to keep home records in this systematic way, and that they cannot be "bothered" with filing the ice receipts and checking up the butcher's bill.

I want to ask such women why they are eager to crowd the modern business office for a small and inadequate living wage? Will any woman tell me why she has more chances for "self-expression" if she tabulates figures, files data, or makes out price-lists for typewriters or tailored suits or carboys of drugs in a crowded office, in manifestly unæsthetic surroundings, than if she used that same ability in tabulating figures, data and price-lists in her own home, about her own affairs, where she is surrounded by as æsthetic a background as she chooses to make

it, and where every stimulation of love and companionship is offered her? Why does the modern woman prefer to check up her employer's bills rather than her own? Why is it less interesting to make out a card of family sizes than it is to list hardware and drug sundries, about which she knows nothing and which do not concern her life one iota?

I believe the keeping of home records will prove just as stimulating to any woman who tries it as the keeping of an employer's records — and there is the added weight of self-interest in the home, which is lacking in business. The efficient homemaker will believe that it is a necessary part of her profession of homemaking to keep her records "reliable, immediate, and accurate," and that it is just as commendable to have her home run in such a manner that a stranger can run it in the same grooves as herself as it is desirable to have the cogs in a great railway system go right on moving, even though the finger of the president of the road ceases to write his dictates.

CHAPTER NINE

THE NEW HOUSEKEEPING COOK-BOOK

I CAN recall the large brown-backed cook-book which my mother used and which finally became swelled to twice its original size by the addition of clippings, pasted recipes, and house hints stuffed in at the back and front, and scattered among the pages. When the book became of this unwieldy size, my mother would threaten to make separate scrapbooks, complaining she had mislaid the mincemeat recipe Aunt Edith had given her, and had looked and looked and couldn't find it!

The average cook-book becomes mussed with use. You want to see how many raisins the coffee-cake recipe calls for, and you page the book to see and you get it all soiled from your doughy fingers. Or, splash! go the eggs over the mayonnaise recipe you are following from the

opened book before you. Your Southern friend gives you her recipe for beaten biscuits, or that eggless cake you mean to try, and you stick it hurriedly into the back of the big cook-book, and when you open the book the next time it is gone, or, if there, the paper flies to the floor.

I have made for myself a filing cook-book that avoids all these faults. I know there are card cabinet cook-books on the market, but what I wanted was a selected list of recipes, choice recipes of my friends, or those I have tested from magazines. I also use the large, regular cook-books, but use them chiefly as works of "reference." If a large book contains recipes which I use often I transfer them to cards in the drawer instead of using them in the book itself.

I either paste or write or typewrite the recipes on cards. A small paper clip is fastened on the front of the drawer and into it I stick my card, so that it stands steady and enables me to read from it as I go about the kitchen preparing the requisite materials.

The "New Housekeeping Cook-Book," as I call it, is just another drawer similar to the one I

described for use with household records, only filled with larger cards — 6 by 4. I keep the drawer over the kitchen table where I work, and when I want to see how to make "tomato purée," for instance, instead of laying the cook-book on the table and mussing it all up, I merely take the "tomato purée" card from the drawer, stick it in a little clip on the outside, and go about gathering my materials, without touching the card, which I put back after use, with clean fingers. The drawer should always be placed at the eye-level, for easy reading.

I recently made another improvement in the use of the drawer, and had it fitted on grooves into my kitchen cabinet, under the cabinet top. I had the front of the drawer slanted back at a slight angle, so it could be read more easily, and a piece of glass over the front insures the cards being clean. I divided the drawer into sub-heads as follows, although any preferred group ing could be given:

Beverages
Bread, Rolls, Muffins, Biscuits
Cocktails
Beans, Peas, Lentils
Cakes and Icings
Candies

Desserts
Fish, Lobster
Game, Poultry
Jelly, Preserves
Meats
  a. Beef
  b. Brains, Sweetbreads, etc.
  c. Mutton, Lamb
  d. Pork
  e. Veal
Menus
Pastry
Pickles and Catsups
Salads
Eggs, Omelets, Rabbits
Fruits
Fritters
Ices and Creams
Macaroni, Rice, Curries
Oysters, Clams
Puddings
Potatoes
Sauces
Sherberts and Punches
Soups
Special
Vegetables
Waffles

Under "Meats" I have two cards of the meats I generally prepare, divided into two groups, one "requiring one hour or less," the other from "one to four hours." Under the dessert card I have divisions, such as "Desserts with Eggs," and another, "Desserts without Eggs"; on another card under "Special" I have a list of what I call "Complete Meals" — that is, meals in which one or two balanced dishes give a meal containing all necessary amounts of fats, carbohydrates, protein and salts. I have a card marked "Lunch Dishes" which aids as a reminder for that sometimes trying meal. Under

"Menu" I have several cards containing menus I have read, or more frequently those I have found particularly successful the times I tried them at home. Another "Menu" card contains a list of dishes for more formal meals. It used to be that I would often come to the point of not knowing "what to have for dinner." Now just a quick twirling of the cards in the card-cabinet cook-book, and I am bound to find some happy suggestion under "Dessert," "Meat" or "Vegetable."

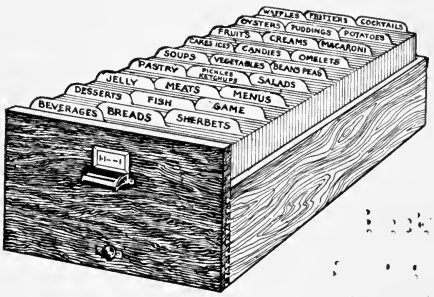
There are four points I am trying to cover with this cook-book. As yet I have not had time to finish them all, but when I have I shall feel that I have made a valuable addition to the accuracy of my recipes. A recipe must be excellent — "reliable" — first. But is that all? Does not the housewife always ask the following questions when trying a new recipe:

1. How long does it take to prepare?
2. How long does it take to cook?
3. How much does it make?
4. How much does it cost?

I am trying to answer each of these questions

CROWN ROAST OF LAMB WITH PEAS AND STEAMED WAFFLE POTATOES

Select parts from two loins of lamb containing from seven to eleven ribs in each. Scrape the flesh from the bone between the ribs, as far down as the lean meat and trim off the backbone. Keep the ribs on the outside, shape each piece in a semi-circle and sew together to form a crown. Tie securely. Cover each chop bone with a thin strip of salt pork to prevent burning. Dredge with flour, sprinkle with salt and pepper, and roast for an hour and a half until tender throughout. Remove the cubes of fat and replace with paper frills. Serve on a hot platter, with green peas in the centre of the crown, and steamed waffle potatoes around the base.



Specimen recipe card with illustration, from
Filing Cook Book
The New Housekeeping Filing Cook Book

for each recipe. You see what a point of exactness and reliability such answers would give. I have worked it out with "Oyster Soufflé," for instance. I have written in the corner of the card:

1. 15 minutes 2. 20 minutes 3. Serves six 4. 35 cents

A friend has made herself a cabinet like mine and she says she finds the plan a fine one to help her maid to learn to cook. She gives the maid one card at a time to prepare, and it seems easier for the maid to follow the one card than to read in a book, where the double page of recipes is confusing. The maid said she would "cook all of them cards yet," and the plan acts as an incentive to learn one card after another.

I can hardly express the satisfaction that this filing cook-book gives me. As the drawer holds a thousand cards, I have plenty of room to add the many new and appetizing dishes whose recipes I see in magazines. I make a point to clip all interesting recipes from booklets, or elsewhere, and these I first keep in the large

filing envelopes I mentioned before. Then I try, or "test," each recipe, to find out if I really like it, and wish to include it among my staple dishes. If it proves a success, then I copy it on a card for the drawer itself, in this way making the drawer a "blue-ribbon" cook-book of only the tested and most choice recipes.

CHAPTER TEN

APPLYING THE WAGE SCHEDULE AND BONUS IDEAS TO THE SERVANT PROBLEM

In previous chapters I have shown how the first nine principles of industrial efficiency can be applied to the tasks of homemaking, and how these ideas are especially helpful to the woman who does her own work. The points of "ideals," "common sense," the "counsel" she must seek, how she can "standardize" the tasks, operations and conditions of housework, "dispatching" and "scheduling" these tasks like trains, and, last, keeping her home records "reliable, immediate, and accurate" — all these we have applied to the woman who is her own servant.

Thus far, then, we have been studying how to apply the *practical* points of the efficiency doctrine; there remain the three last points, which are largely *ethical* — those of the "fair deal," "discipline," and the "efficiency reward," and

which do not concern the woman herself as a worker as much as they do the worker or servant she employs.

The real final goal of all the efficiency doctrine is not that a given task be done in such a time without waste motion, or with a certain tool; the final goal is the *increased efficiency of the worker*, and her *increased* material and mental *success*. This is the true goal whether we speak of the woman who applies these principles to herself as worker, or whether she applies them to a worker she hires.

Let us consider how the "fair deal" and "efficiency reward" concern the servant in the home; because in factories and shops where efficiency prevails, the greatest pains is taken to develop the individual workman. Heads and bosses of departments try hard to find out just the particular kind of work for which a man is fitted; elaborate bonus systems and schemes of wage-payment have this end in view — the material and mental prosperity of the worker. It is because it has this end in view, and successfully accomplishes it, that there are almost no

strikes in factories where efficiency and scientific management of men prevail. This is true in spite of the fact that efficiency has most frequently been applied in trades where strikes are most frequent.

We women have talked much about "solving the servant problem" for years; yet conditions seem to grow worse rather than better. Fewer servants are recruited each year, and the good Irish and German stock which entered service twenty years ago is being replaced largely by the southern European, Bohemian, and Slav girls, who are much harder to train into our American ideals. Various and many plans have been tried with fair or no success; and the "problem" seems to grow more acute and complicated all the time.

After studying with me the new ideas of efficiency and scientific management applied to the home, a friend of mine who employs a maid tried out the efficiency ideas which I have explained in previous chapters. She standardized her household tasks, she made schedules for the maid to follow, she gave the maid the

right tools to use in the kitchen, and in every way applied the "new housekeeping" in the work which the maid did for her. After some preliminary difficulties in getting it applied, the housework went on as if done by magic, and the smooth-running way in which her home was maintained delighted my friend beyond measure.

One day, however, her maid said to her: "I ain't complaining, ma'am, and I'd rather work this way than the old way, now that I've learnt; but this idea of yours don't seem to work so much good to the girls as it does to you. I can do more work by doing as you say, and easier, too; but it don't make no more pay for me, and even when I hurry up and get done sooner I don't get no more time to myself. Seems as if when I do more I ought to get more, but I can't quite figure it out."

"I tried," said my friend, "to make Katy see that the object of all my ideas was to make her work easier. She acknowledged that, but she proved that she was doing more, and she didn't see that my scheme helped her financially even

if it did reduce the effort with which she did her work. "When I thought it over," my friend continued, "I saw that Katy was right. I had been applying the practical points of the efficiency gospel, so that Katy was able to get more work done than before I taught her, but I had forgotten to apply the last three *ethical* points of the efficiency gospel, those of 'fair deal,' 'discipline,' and the 'efficiency reward,' to the one who was benefiting me by her increased skill.

"Katy gets more work done because she applies the schedules and plans I have given her. This does benefit me, but, as she rightly asked, where does she come in? In other words, where does the worker or employee benefit because the employer adopts the new and more efficient housekeeping? It was distinctly up to me to see how a plan which benefits me would benefit Katy as well."

So my friend began to think it over, and recalled that in almost every industry, in all the factories which we visited, or had heard about, the conditions of work, the wages and the hours have all been standardized by law. But Katy

is still in the same barbaric state of vassalage which was once common in all industries.

"I didn't like to admit it to myself," my friend continued, "but when I looked at the matter squarely I had to concede that my attitude toward Katy is that of an arbitrary General toward his soldiers. I say, 'Do this,' and I expect her to do it without question; not because it is right or fair or the best way, but just because I say so. And I expect her to accept such rooms and board and hours and comfort as I choose to give her, and to be satisfied even if I stop her in the middle of the breadmaking to button my dress, or if I have company on washday. Now that's the naked truth, Christine, and I couldn't get away from it.

"After I got to that point I began to lose my wonder that a girl hesitates before entering the 'servant class.' I began to see that a girl in this class is isolated from her companions and looked down on by them as inferior to typists and clerks. Her health is not cared for. I read the report of one investigation board which tells us there is a higher percentage of consumption

among servants than among other workers; a second commission reported that more insanity is found in this class; and Miss Jane Addams, writing recently, says 'there is more danger of prostitution for the girl in domestic service than in any other occupation.' We give her no mental stimulus nor impulse to improve. Most important, we give her no wage stimulation which might urge her to better work. This is how I had been treating Katy."

"Well," I asked, "how did you apply these ethical points to Katy?"

"First," answered my friend, "I changed my whole attitude toward her. I dropped the dictatorial idea of ordering her around and feeling that she is a subordinate. That is a false relation, and is the very heart of the difficult situations between mistress and maid. Under scientific management there is no arbitrary commanding officer — there is 'team work' of equals.

"But before I assumed this new attitude toward Katy I had also to assume a new attitude to my profession of homemaking. I had to

think of it as worthy of my highest efforts, not degrading or unimportant. Then with this ideal firmly in my mind, I could the more easily convince Katy of the dignity of *her* work. Great soldiers or business men are not willing to ask others to do what they themselves would be unwilling to do. The best mistresses are those who will be able and proud to perform any detail of work, just as the greatest printer I know, who is also worth thousands, is able to set up the most complicated machine in his shop, from the first screw to the last.

"Then I made up my mind that Katy should share some of the benefits to workers which are granted in other industries. Consider what factories and business houses do for the comfort and health of their employees nowadays. They maintain, among other things, reading-rooms, clubs, social centres, nurses, matrons and recreation roofs. I saw to it first that Katy's room was properly heated, that it had proper light and ventilation and was furnished comfortably. Her room was all this in a way, but when I got at it I found much to be desired. Then I gave

her a high stool to use for her work in the kitchen, and I trained her to see that the kitchen was well ventilated. I saw that she had comfortable shoes and that she observed personal hygiene. By doing these little things for Katy she got it into her head that I was giving her a 'fair deal,' and at the same time it insured her devotion and interest to myself. I got for her some good books, and books on domestic science of the simpler kind so that she might develop mentally and form some broader idea of homemaking than the limited round of daily duties teaches her.

"Then I went to a large shop and talked to the foreman and asked him to explain to me the new attitude of scientific management that the employer is assuming toward his helpers.

"He said that under scientific management the *employer assumes the responsibility* of enabling the employee to work under the best conditions. You see how this is entirely opposed to the old theory of making the employee work by force, or putting the responsibility on the worker. The old way, he said, was for the foreman o<

manager to say: 'Here's a casting; go and anneal it.' And the workman chose his own tools and his own time, and did the job just as he thought best. If it was a good job all right, but if it was a poor one the worker didn't much care. Now it is all different. Under scientific management the employer first studies the task to be done, and the employer finds the best way, the shortest way, and the best tool to use in doing it.

"Then the foreman hands the worker a card, a kind of instruction card, which tells him exactly how to do this task, what tools to use, and how long it will take. So the man *must* do a good job, do you see? The employer has planned so well that the worker cannot fail. And because the employer has planned so well his workmen accomplish more work with less effort and less waste, and have become efficient workmen.

"I had done all this for Katy. I had studied her household tasks and found that bread takes so long to make, that it takes thirty minutes to tidy the rooms, and that the best way to wash dishes or iron or do some other household task

takes only so long. I had made Katy follow schedules based on these data, and her efficiency was greatly increased.

"Now as to where Katy comes in: I found out how the other workers under scientific management receive an incentive to do more work. This foreman explained just how his men receive what is called an 'efficiency reward.' All the workers receive so much as a daily wage for certain standard amounts of work. But if they do more than the standard — that is, reach a high percentage of efficiency — they receive a 'bonus' of extra money. But it is not always *quantity* of work that is the goal of efficiency, but *quality*, skill, and more *responsibility* in work. The foreman said that before scientific management was in practice in this shop the workmen used to do the least amount of work they could, many of them, and that word would often be passed around secretly among themselves to do just as little work as possible. Why? Because under the old plan it was the employer, and the employer only, who benefited by the workman doing more work. But under the new plan the

more the worker does the more he gains in actual increase in pay. And if he shows especial aptitude and skill he is promoted to positions of responsibility.

"Now do you see where Katy was right? She, too, must receive an 'efficiency reward' for more work done, or for the higher skill she develops. Nothing acts so strongly upon a worker as this money or promotion incentive to greater output or skill. But it is just this stimulus that my Katy and other Katies are not given under the old plan. They see themselves drudging away forever at the same old pay, with no chance to rise. Under those conditions what is the use of trying to do your work better, or staying in one place any length of time?"

"How did you give Katy this extra stimulus?" I asked.

"First," said my friend, "I thought about Katy's hours of work and the wages she gets a week. This 'hours' question is one of the most difficult in our whole readjustment of the servant problem. Nearly all girls will tell you that the hours are so long they 'never have any

time to themselves,' and that their work is never done. We have extra company and keep them very late, or we ask them to change their Thursday suddenly to suit our convenience. Yet we never make it up to them.

"I first standardized her work, her tools, her operations, basing on them schedules for her to follow. Katy at once did more work for me, with less effort to herself, in the same time. Here I am the gainer. But Katy must gain too. She must have free time and extra incentive to work.

"Now Katy gets $5 a week as a houseworker, which is about 80 cents a day. I made up the following schedule of wages and hours based on this sum:

KATY'S DAILY TIME SCHEDULE

Regular hours of work (at 8 cents an hour)

7 A.M. — 3 P.M.

5 P.M. — 8 P.M.

11 work hours daily at 8 cents

REGULAR OFF TIME

Work done in these hours 10 cents an hour

3 P.M. — 5 P.M.

After 8 P.M.

Sunday afternoons or alternate Thursdays

"This simple time schedule brought out these points: that Katy's regular hour-wage should be based on about 8 cents an hour; and that I should give her 10 cents an hour for extra or over time. Her regular hours were as given, leaving two hours off in the afternoon, when she was free to mend, read or go out for a walk. I know that maids do have hours off, but they are always subject to mistresses' whims. On my schedule it was understood that Katy's free hours would be inviolate unless they were considered extra hours at extra pay, just as they are in a hospital or factory. If I wanted Katy's services during those two hours, or after hours, as when dinner was late or extra company delayed the work, then I paid for it. If I asked her to give up her Thursday to assist for an unexpected guest, I paid her by the hour, or about 50 cents for the afternoon.

"In other words, I trained Katy by my efficiency methods to become a trained worker, and then I paid her as trained workers are paid in business houses or factories."

"Yes," I commented, "but isn't it true that

many mistresses do already train their maids and give them privileges and favours? Yet it seems that the more they get the more they want, and in cases where the maids have been treated with the utmost fairness they have nevertheless left their mistresses unexpectedly and when most needed."

"That is true," said my friend, "but I feel that when the present mistress-slave relation is changed to a businesslike one of employer-employee, with schedule hours and extra pay for extra work, the service will be put, as it should be, on the same plane as in other employments, and these present troubles will not occur any more than they do in my husband's office.

"By this system we not only give Katy a 'fair deal,' but we also put in force the point of 'discipline.' Certain work is scheduled for her and she must accomplish it. My plans must be carried out; she must feel the responsibility of her work and not shirk it. When she understands my plans, based on the best way to do her work, she must accept this programme and carry it through.

"The 'discipline' of the Navy shows what I mean: the men have a spirit of loyalty to their work; even though it is hard, they take pride in it, and are proud that they belong to the service. It is something of this spirit of loyalty and pride in even difficult work — a willingness to 'stand by' and do their best — that must characterize the 'discipline' of the servant to make her a success.

"But," continued my friend, "other plans and means can be used to increase the efficiency of servants, and raise the standards of their work."

CHAPTER ELEVEN

INCREASING SERVANT EFFICIENCY

"THE stimulation of increased pay," continued my friend, "is probably the strongest spur to increased effort that we can give the servant or any other worker. It is because we wish to have some basis for measuring this extra pay, or 'bonus,' that I worked out the wage-schedule given in the last chapter.

"My idea, like that of Mr. Taylor, is that every worker should be paid first a day-wage, of settled amount, just because he puts himself at your disposal as a worker. But in order to increase the efficiency of the worker, we must give this additional 'bonus' or 'reward' above and beyond the day-wage. It is the familiar example of the salesman who has a regular salary and 'commissions.' It is the extra per cent. given on his commissions that stimulates the man to increase his sales.

"It is harder to arrange bonus rewards in the home than in the factory, but some can be planned. There are certain dishes, certain whole menus, the mastery of which might be held out to a cook as a stimulus for her increased efficiency. A mistress could say to her cook: 'Here are twelve dishes, or six luncheons, that I want you to know how to cook, just all by yourself. When you can serve these without any aid from me I will give you so much.' Or she might put responsibility with the children as another incentive, promising to raise the maid's wages when she could relieve her of certain details of their care. Another bonus might be given when the maid had learned to do the ironing, so that a washerwoman need not be employed so often.

"An excellent bonus is the offer of two weeks' vacation, with pay, to any servant who has been in steady employment for one year. Another, giving the maid the whole of Thanksgiving Day, Christmas Day, or other holiday. If the family celebrates either Thanksgiving Day or Christmas Day at home the other may be granted as a

bonus to the servant, or she may be given extra pay for working on holidays. Extra pay during prolonged stays of guests is only another side of the 'fair deal.'

"I have found that young girls employed as servants often deplore that they never have a morning when they can sleep late after a party or dance. Perhaps we never even thought of that, and how good it would seem to sleep late once in a while just as we do! The girls have Thursday and Sunday afternoons off, but always must be up again the next morning early. An easy way of making a bonus would be to count all day Sunday as two Thursday afternoons, and let the girl off from Saturday night until Monday morning, so that she could sleep late Sunday at some friend's house if she wished.

"It is impossible to estimate the stimulus that some form of bonus gives to the worker. Give a girl a bonus like some of these, or tell her you will raise her wages when she can cook ten dinners from your cook-book, and see how the incentive works! She will probably become enthusiastic and interested in her work, because

she will see that you want to give her an efficiency reward as well as to consider your own benefits from her increased efficiency."

This successful experiment of my friend to apply the ethical points of the efficiency doctrine to her maid has stimulated me to investigate the subject further. Under present conditions the servant works in isolation in the home, removed from social pressure, which induces competition, and hence skill. In the factory "Katy" sees other girls at work, and there is a rivalry as to which does the most and is the most successful. At present there are no efficient standards for the servant. The demand is far greater than the supply, and hence a servant of very poor skill stands a chance of employment. On the roof of one of the largest machine shops in the country hangs the permanent sign, "Skilled Workmen Wanted." In this factory a system of demerits and merits exists in which the workers practically grade themselves. The factory has established high standards of work, and when a workman presents himself he is not questioned, but put to work at his own price.

If he can satisfy the standards set, he will be retained; if he can exceed them, he receives extra pay; if he cannot "make good," he automatically puts himself out of work. Now, some such *graded pressure* of work may in time replace in the home the social pressure exerted on the "Katies" of the outside world.

But until we raise the standards of work in our homes, which would make such a graded pressure possible, we must have recourse to other forms of incentive. A whole chapter might be written on the psychology of suggestion and surroundings on the worker. The light, cheery kitchen with sanitary fittings and decorative utensils cannot fail to react cheerily and happily on its worker. "Like mistress like maid," is an old saying, but it is true to psychological laws, and we know that neatness, thrift, and order in the mistress will tend to evoke the same attributes in the maid. Imitation is one of the strongest means of increasing efficiency in any line. Most of our human progress is due to imitation of what some other individual originated and used, wore, or ate.

Servant efficiency can be increased by setting for the servant an example of neatness, economy, and dexterity in work, which she will subconsciously imitate.

Not only in material matters will this point of imitation increase the servant's efficiency, but also in the psychical attitude of the mistress to the maid. As my friend said, how can a maid believe in the dignity of homemaking if the mistress herself considers it beneath her, and thinks it fit only for hired workers? How can a maid regard her work as worthy of her best efforts if the mistress thinks housework beneath her, and never takes an active interest in it? It is only when the maid feels that the mistress believes in the tremendous importance and value of true housekeeping that she will imitate the attitude of her employer.

The new idea of scientific management in handling workmen in factories is to enforce a spirit of "team-work between equals." The "boss" has given place to the trained helper, who guides rather than dictates. His aim is not to make everybody responsible for work but

himself, but to assume co-responsibility with the worker. This different attitude which the "boss" assumes toward work is reflected in the worker. So, too, the maid will imitate this mental attitude of work if the mistress responds and sees that their work must also be "teamwork of equals." It is an actual definite rule in many scientifically managed shops that superiors say "mister" in addressing the humblest workman. How many good potential servants have become poor stenographers because of the odium of the name "Bridget"?

Another means of increasing servant efficiency is to stimulate the loyalty of the worker. We work best for those we love. This loyalty can be generated by the mistress assuming the "teamwork" attitude, and by her genuine interest in the worker. We can never have loyalty unless we have some degree of equality. Servants of the "old days" are universally spoken of as loyal. These servants were loyal, I think on the final analysis, because in those days servants were much more a part of the family in which they served than is true of servants to-day.

The old "mammies" and "followers" who sometimes made great sacrifice for master or mistress did so because they felt it was for one of their *own* family. It may be harder to stimulate this attitude to-day; but we have examples of the loyalty of workers in factories and shops, which always result when the workers feel that their employer is honestly desirous of serving their best interests. It is this loyalty, this "service plus" attitude of the worker to his employer, that the efficiency gospel is peculiarly able to develop.

Another strong psychological means to increase servant efficiency is to stimulate the servant's interest in her work. I do not mean stimulation in the *result* of labour, but training the servant to get pleasure *in the doing* of good work. Experiments in the kitchen, new dishes, new ways of serving, or the testing of new devices, are all means to create interest. Work done because the worker likes to do it is always done well. Pleasure generally accompanies interest, and if the worker can be made to enjoy her work, her efficiency will certainly increase.

One of the interesting points experimented with in factories where workers were employed at tasks requiring severe strain or skill, particularly among women workers, was that called "resting periods." Instead of letting the worker continue for a long stretch at difficult or tiresome work, the workers were *made* to stop for certain periods and do something pleasurable, like going outdoors, moving about, talking, or even dancing. This few moments' absolute change of position and attention made it possible for the girls to return to the difficult task and do it several points higher in efficiency than if they had continued without a change. There are many women kind enough to give the servant change of work, or leisure, but too often there has not been intelligent enough planning to arrange the tasks so that the monotony of standing, for instance, is varied. This idea of "resting periods" should be as capable of increasing the efficiency of the servant in the home as it is that of the factory worker.

Even if we have done everything possible to increase the efficiency and prosperity of the

worker, we have not completely done so, in my opinion, until conditions permit the servant to live her own life outside the home in which she works during the day. I believe that we are gradually coming to the abolishment of a permanent serving class in our homes. There is everything to be said against a servant living in one's home and not being a part of it. Even though we raise the standard of the servant class to the dignity of skilled houseworkers we shall never absolutely solve the question until the worker ceases to live with us. I know it is not an entirely original thought with me, but I can see no practical reason why we shall not have servants — skilled servants — work for us, who live their own independent lives at their own homes, and come to us daily as washerwomen and seamstresses do now, or as workers go to office and factory. This is now done quite extensively in New York City flats and apartments where room space is at a premium, and particularly by the coloured workers. I believe we will come to it in all our homes. We would have to pay them more, but this increase would

be balanced by the reduced overhead expenses that every permanent servant entails, and the necessity of having fewer rooms and thus smaller houses.

I believe, thoroughly believe, that by adopting more definite hours, by attending to the comfort, hygiene, and relaxation of our several "Katies" by exchanging our dictatorial attitude for one of fairness, and by offering a stimulus of extra money — of a bonus — and a promotion for increased efficiency, we women would very greatly solve the "servant problem."

Just as now we support extensive training schools for nurses, as well as business training schools and colleges, besides the forms of training given by domestic-science courses, agricultural institutes, and those trade or professional schools where work or practice is combined with learning or mental development, I believe we will come to have large institutes which shall teach housework and homemaking in a practical way; where courses will be given on marketing, buying materials, sanitation, standard practice in housework and cooking — institutes which

will graduate, not teachers, but trained workers to take the place of our present unskilled servant class. I believe that is what we are coming to, and the signs are already on the horizon. But the mistresses must themselves be ready, which you know, my readers, as well as I do, they are not.

CHAPTER TWELVE

DEVELOPING THE HOMEMAKER'S PERSONAL EFFICIENCY

WE have talked a great deal about methods and systems, plans and schedules in the household: now comes the most vital, the most difficult point of all, and yet the keystone of the whole matter — *the personal attitude of the woman toward her work.*

Without properly applying the modern ideas of efficiency to her own mind (which is in itself a complete and separate organization) the whole plan of "the new housekeeping" falls to pieces. No stream can rise higher than its source, and no household efficiency can be greater than the personal efficiency of the woman who directs it. This explains why there are literally millions of women in the world to-day who feel "up against it" about their households. They have helpful household magazines a-plenty, and labour-sav-

ing devices a-plenty, but the never-ending-ness, the detailed-ness, the wearing-ness of their work become too much for them. It closes over women like water over a drowning person, and women confess themselves overcome, actually assuming the mental attitude, in regard to their work, of *slave to master*, instead of master to slave.

I never realized how terribly true and widespread this condition is until I became consulting staff contributor on the greatest woman's magazine in the world, and received daily batches of letters from women of all classes, incomes, and temperaments, from all over the world. The burden of their story has always the same terrible minor note of cowed despair in it, whether they live on the plains of Nebraska or on the Scotch heaths across the sea — the same outcry against something that seems to stifle and bind them; the same despairing resignation that there is no possible relief; the same feeling of personal helplessness. And, I am not at all ashamed to say, I have experienced the same feeling with regard to my own household, especi-

ally with the problem of caring for small children with but little help.

The actual, widespread state of mind of many millions of women may be classified and divided about as follows, as I have excellent reason to believe after the closest and most confidential correspondence with many hundreds of women everywhere:

(1) A general feeling that they are weighted down by fate and circumstances, and that their housework is a kind of ogre who has them in his grip, from which they cannot escape, or against which they do not seem to be making any headway.

(2) An attitude which mistakes the physical work of *housekeeping* for the real ends of *homemaking* — which thinks it is making a home when in reality it is only keeping a house; which measures housekeeping ability by the amount and exhaustiveness of the physical work accomplished.

(3) An automatic, dull sort of attitude which goes through the routine with as little thought or analysis as possible, following any traditional methods, aiming only to get it finished as soon as possible, and skeptical of any new way of getting work accomplished.

(4) A mania for some one phase of housework — such as cleanliness, decoration, cooking, etc., on which all originality and effort is spent, to the neglect of general efficiency.

(5) A puttering love for all housework, to the extent that work is prolonged, elaborated, and repeated, which takes up several times more energy than necessary.

(6) A general lack of confidence, and inability to find and apply remedies for conditions they know to be wrong; a procrastination in applying remedies they already know to be effective; a half-heartedness and lack of patience and thoroughness in applying any new

methods or routine; failure to maintain discipline over themselves.

(7) An attitude of mere tolerance toward housework — preferring business or other careers, looking impatiently and contemptuously on all housework, hoping to be relieved of it entirely some day, and exchange it for something "more interesting."

Every one of these attitudes of mind is really poisonous and antagonistic to either efficiency or the highest personal happiness and character. These seven typical attitudes of mind have hung like millstones around the neck of the real emancipation and development of women. The first great work of efficiency in the home, and of liberation of women from household drudgery, is to exchange any or all of these attitudes for the efficient attitude, my interpretation of which I write down here in italics so as to give it every possible emphasis:

First of all, the efficient attitude of mind for the housewife and homemaker is to realize that,

no matter how difficult and trying are the household tasks and burdens she finds placed upon her, there positively are ways to meet and conquer them efficiently — IF *she approaches these problems vigorously, hopefully, and patiently.*

Second, that far from being dull drudgery, homemaking in all its details is fascinating and stimulating if a woman applies to it her best intelligence and culture.

Third, that no matter how good a housekeeper and homemaker a woman may already be, she will be eager not only to TRY, *but to persistently and intelligently keep on trying, to apply in her home the scientific methods of work and management already proved and tried in shop and office throughout the world.*

The *inefficient* attitude of mind always shows itself by the tendency to "run around in circles" without getting anywhere. It doesn't *start out* right in making a judgment, because it doesn't deliberately put the problem before the various viewpoints of mind which ought to pass on it. It flies like a shuttlecock from one consideration

to another, never arriving at a conclusion which it itself can trust. We must *come to conclusions and definite plans of action on a problem before we really can say we have done good, efficient thinking.*

The mind must be taken in hand, *managed* and *organized*, in order to be efficient. It is a whole world in itself. We, the master of it, whose will it ought to obey, may be (and in thousands and thousands of cases are) as helpless and ineffective as a school teacher unable to manage a roomful of boys. One dare not let the mind doze and dream too much without coming to conclusions; the mind must be *commanded and manipulated.* It must be stimulated and encouraged and studied. It does not produce fine results by chance or accident or inherited genius. Left alone, the brain tends to idle and to make all our actions and thoughts automatic, dull, and habitlike. Our minds do not ordinarily prefer to think efficiently; they love to see things *as they prefer* to see them, rather than as they are. They love to dwell in impossible air-castles and imagine themselves in ideal surroundings. Therefore, any one wishing an alert

mind must systematically coax, lure, or interest it to concentrate efficiently on problems of life as they are. So many thousands of women let their minds "play hookey," so to speak, and become unable to *think through to the end* of a problem and arrive at efficient conclusions in which they have faith.

By far the best and most permanent way to teach the mind to think efficiently is to really *interest* it. People who are not intensely interested in a subject *actually do not see the situation as it really is.* They miss many wonderfully interesting elements and details in what they consider the common, uninteresting things of life. That dishwashing involves half a dozen sciences, and that logic, philosophy, and sociology have relation to it, seems silly to many women. Yet that's what the bricklayers said about bricklaying when Gilbreth revolutionized it with motion study science; and it took Maeterlinck to see the bookfuls of marvellous things in the simple beehive.

A fireman arriving at a fire sees many more things than the ordinary spectator, who usually

sees nothing but smoke and flames, and feels excited. The fireman is cool and his mind calmly takes up point after point about the direction of the wind, the draughts, etc.; and while others run around helplessly he is intelligently and often successfully mastering the fire.

The woman who interests herself deeply in the smallest detail and new angle or idea about her work is preparing, like the fireman, to act intelligently and successfully under trial and difficulty. Just as the efficient fireman loves to use his mind against any and all kinds of bad situations, so the efficient housewife loves to tackle anything that confronts her *with her trained, efficient attitude of mind*, taking hope, zest, and cheer in her job, and using all the knowledge, help, and suggestion from anywhere that promise to prove useful.

Notice that, as in the case of the fireman, *it is mind far more than muscle* that wins. The only reason that man is not still a savage is his capacity to analyze, study, and plan. Women have, however, relied far too much on custom and their

emotions, with the result that they have not lifted their sphere of labour out of the hard physical drudgery era, as man has lifted his office and shop, by scientific management and invention.

We have had plenty of *invention* for the household, but the great need is now for more science of management, and, above all, for more efficient thinking and analyzing. For in the home, as everywhere else, efficiency *must start in the mind of the directing spirit of the establishment.* Thousands of men are *inefficient*, but are *made* efficient by submitting to the direction of efficient men who stand over them. It is the great misfortune of women as homemakers that each one of them must stand alone as the directing head of a separate establishment, without any trained, efficient mind to guide and direct them. They must apply what efficiency they have or can learn, alone; while men in office and shop can not only be under the guidance of efficient foremen and overseers, but they have in addition the social stimulus of working among other men in competition.

It is therefore *immensely, terribly important* that women get themselves in connection with modern efficiency science, and, most important of all, *bring themselves up to a really efficient attitude of mind.*

What are the practical steps which must be taken to get this efficient attitude of mind, and what does the efficient attitude of mind do when it tackles a problem? The methods of efficient thinking about a problem are the same in the home as anywhere else, and may be listed as follows:

(1) To separate a problem carefully into its various parts.

(2) To look all the parts of the problem courageously, fully, and sincerely in the face, missing nothing.

(3) To arrive at definite, positive, practical conclusions about each part of the problem, and then about the whole problem, after looking at it from many angles.

(4) To "check back," or prove, each judg-

ment or conclusion by going over it again before accepting it as final.

(5) To take definite steps to put the conclusions into a plan of action, and stay by it until it is carried through successfully, or else replaced by another plan of action to fit new conditions.

(6) To refuse to let the mind wallow and dawdle around a problem without arriving at definite, actionable conclusions; or to arrive at conclusions without putting them into practice and testing them out; or to find a plan unsatisfactory without at once reanalyzing the whole matter and getting to work upon another plan of action.

It is deadly *indecisiveness* which has held back so many women, and given another arrow to the jokesmith to aim at our sex. Efficient thinking routs out indecision like fog driven before the rising sun. Women are also accused of deliberately cheating themselves by ignoring unpleas-

ant facts and conditions. This has cost homemakers more than they realize.

Woman's vanity has often kept her from admitting that many of her problems are so distressing simply because of her own lack of personal efficiency, not because of circumstances, fate, or other people. In most cases, however, she never even suspects that she is not as efficient as she might be, and points to the hard *manual* labour she does as proof of her efficiency — as if that didn't prove *just the opposite!*

Many women have hard, even terrible, burdens to bear for which they are in no way responsible; but even if these burdens cannot be lightened, *after sincere, efficient thinking and acting*, there still remains one solution — to carry these burdens with an efficient attitude of mind. Such an attitude may be the entire difference between happiness and unhappiness.

The efficient attitude of mind is really the balance-wheel to the homemakers' entire life and work. I am more interested in making such an attitude universal among women than I am in urging upon them motion study, dispatching

and scheduling, and other methods, for I know well that these will come if the attitude of mind is efficient; while I also know that they cannot come without it.

You see, I am so deeply convinced that the nutshell of the whole matter is *that women master their work, instead of letting their work master them*, that I am ready to recommend that all methods and schedules be occasionally thrown overboard in order to attain mastery and independence if necessary or advisable.

The end and aim of home efficiency is not a perfect system of work, or scientific scheduling, or ideal cleanliness and order; it is the personal happiness, health, and progress of the family in the home. The work, the science, the system, the schedule are but some of the means to that end, not the end itself. We must use them, or sidetrack them, just as needs be, to attain the real ends of homemaking. The point I want to make clear is *that in trying to master our work we do not want to be mastered by method and system*, thus jumping from the frying pan into the fire!

The 100 per cent. efficient person is not the

one who ties himself up in a wonderful snarl of method and system — but who *makes his mind so clear and efficient* that both the work and the system are his slaves, when he gets into action. Therefore I would feel very badly about it if my earnest plea for a more efficient attitude of mind should result in nothing else but increased slavish devotion to work. I do not call that woman efficient who thinks it a sacrilege to change her schedule of work, leave dishes unwashed and house upset to take advantage of a pleasant afternoon for a jaunt in the woods with the children. Neither do I call that woman efficient who complains that her schedule of work leaves her no time to read a good book or attend an afternoon musical or club meeting. Efficiency would be a sorry thing if it simply meant a prisonlike, compulsory routine of duties. *But it doesn't, please believe me.* Its very purpose is more liberty, more leisure, a shrewder sense of values, and the elimination of wasted energy.

I once knew a woman who dusted the back of every picture in her home every day. She believed this was real efficiency. I also know a

woman who spoiled a delightful camping experience by so elaborating the simple work of camp-caretaking that she rarely had time to enjoy the woods and fields so plentiful about her, and complained after some months of camping that she had never had a single day of rest! This is typical of a large class of women whose sense of values are garbled by inefficient thinking.

Women have need for the very best of logic, culture, and mental training in order that they may judge homemaking values truly.

CHAPTER THIRTEEN

MEN AND THE HOUSEHOLD EFFICIENCY MOVEMENT

Because the science of efficiency originated in man's world of the office, shop, and factory, a large responsibility rests on men to assist women in its application in the home. For centuries women's work has been carried on in the isolation of the home. Man's work during the same centuries has been carried on in the outside world of business, which gave him stimulation and encouragement. His world of business interests provided him with business associates with whom he was able to confer, and he was forced by economic pressure and competitive necessity to improve his work or fail.

Until very recently woman has not had the stimulation of other women interested in her work of homemaking, and particularly she has had no competitive spur to urge her to improve

her methods or raise her particular work of homemaking to a higher development. If a man ran his business inefficiently he failed; but if a woman ran her home inefficiently the only result was a poorly fed and clothed family, which threw still greater burdens on society.

Because of this seclusion and lack of stimulation, women have come to regard their work more from the emotional standpoint than from the scientific. It is not easy for them to reason, analyze, and minutely study home problems. As even an intelligent friend of mine said to me when I was explaining how I standardized a certain task: "You don't mean to think I would be so silly as to bother which hand it was I raised first."

For ages men have been our scientists and discoverers, the originators and developers of industrial systems and methods. Because of his long experience in the industrial world and his keener scientific aptitude and his knowledge of the efficiency doctrine in the shop, the factory, and the office, man most properly must come to assist woman in establishing her home on bases

on which he has for so long maintained his own businesses, and which he created in the first place.

Viewed broadly, is it not a paradox for man to systematize office after office, factory after factory, and never give a thought to the running of his home, which is the object for which all factories and offices exist?

There are exceptions who happily prove the rule, but it is, I think, true that the majority of men are indifferent to the way that a house is run (except from a financial standpoint) and indifferent as to whether their wives drudge or not. I know many cases of wealthy men who indulge themselves in every office convenience, but who refuse their wives permission to purchase kitchen equipment of the better kind; and rarely is it that men who have excellent systems and methods in their business think of discussing them with their wives, or adapting them in their homes.

If for no other reason than selfish interest alone, man should be concerned that his wife or mother manage her household after efficiency

principles. One of the frequent complaints of both men and women is that the over-amount of housework forces a woman to forego much of the pleasure and companionship of her husband's company. Pressure of housework often prevents her, after marriage, from being the "good fellow" that she was as a sweetheart. Perhaps if man would step in and show a sympathetic understanding of woman's work in the home, assisting her to apply in it the efficient methods he applies in his own office, he would profit by more of her companionship.

In certain homes I know of, both man and woman are mutually interested in the other's business. The woman may have worked out a system of home accounts, or her husband has brought from his office various devices like the "tickler," which she can use in the home. In my own case my husband's sympathetic coöperation and assistance have put me in touch with the most advanced office systems, have encouraged me to a more businesslike handling of my finances, and stimulated me in every point to regard homemaking as a profession as equally

worthy as his own. Other husbands I know have coöperated with their wives in improving the kitchen arrangement, or in effecting clever contrivances and helps for their convenience.

Too often the woman is drudgifying — for what? A man who slavishly accepts her work and sacrifice, or for children who do not understand the effort and work she puts forth. He receives praise for his work from his business associates, but never thinks of bestowing praise upon his junior partner for her equally important share in the business of life which they both manage together.

If man will coöperate and assist woman in bringing about this "new housekeeping," certainly a greater companionship between them will be created. It is sometimes complained that women are not interested in business. Is it not equally true that man is not interested in the home? If both will become interested in the business of the other it will bring man's world and woman's world closer together, and create a stronger tie between the man and the woman.

Some definite things can be done by men who

desire to interest their wives in greater efficiency in the home. A visit to a well-managed office or shop, with a homely demonstration of the plans in operation, is very good. Going to hear a lecture on scientific management is apt to start enthusiasm for the movement.

Perhaps most effective of all is to interest other men whose wives are friends. When men succeed in arousing some interest in their wives, such a little social group of women will work out the new idea much more quickly and spiritedly than any woman singly. The purchase of good books is another necessary step.

In all efforts of a "mere man" to lead women toward a new conception of housework and method, much tact and patience are necessary. In some cases women resent male interference or suggestion in house matters, while in many more cases women bear their heavy and troublesome problems alone without sympathy, and quickly respond to a man's kindly and intelligent interest in them. The most formidable obstacle is the idea of many women that a man "never does, nor can, understand what she is up against," and

that in the business office or factory things can be done that cannot possibly be applicable in the home.

A great deal of responsibility therefore rests on men to help lift women out of this fallacy, and move the world forward. Man's pay for this will be increased business, for the inefficient woman holds back business development.

CHAPTER FOURTEEN

THE HOMEMAKER'S RELATION TO BUSINESS AND ECONOMICS

To-day, in Podunk, Mich., or Flagstaff, Ariz., the young men are wearing the same styles of collar and tie that are seen on Fifth Avenue, New York City. As some one has put it, "the country is now metropolitan from edge to edge." Due to this great fact (made possible largely by national periodicals serving as advertising mediums) we find the same kinds of goods being sold all over the country at the same time.

Woman, as the "new homemaker," needs to understand this highly complex machinery of distribution which makes it possible for the Podunk youth and the New York youth to be wearing the same style collar on the same day; or for the woman in Tallahassee to be using the same peanut-butter, neckwear, and flatirons that are the last word in the metropolis. In order to

maintain this distribution in every point of this immense country, great sales-forces and organizations and well-laid out policies exist. These sales-forces for different articles are often so large that they have their own conventions, schools, lectures, and "house organs" devoted to their peculiar fields, and are little worlds in themselves.

What these organizations do, and the way in which the housewife reacts or responds to them, has very direct relation to the cost of living and satisfactory buying. As the housewife is the deciding factor always, the great mass of housewives could do nothing more efficient and helpful than to try to make its response to sales-effort intelligent, and to make itself felt as a body in weeding out cumbersome and costly methods of selling and distribution.

On a general average, it costs *twice* as much nowadays to get merchandise from the factory to the person who wants it as it does to *make* such merchandise. In some cases it is very much more. It is often not at all the desire of the manufacturer that the cost of selling should

be so high; in fact, of late years many manufacturers have started, wherever practical, to sell direct to consumers in various ways. We would not have one of the most famous shoes on the market to-day, for instance, if a bright man hadn't decided to kick aside the long-established methods of reaching you, the buyer. He sold shoes by mail until their worth was recognized, and he could open stores of his own, and sell shoes with the trademark name on them. Other shoe dealers had always refused to sell shoes with the manufacturer's name or trademark on them. There are still a great many such dealers, not only in shoes, but in all lines of goods.

If you as a buyer never asked for anything simply by its common name (like "shoes" or "flour," etc.), but made it your serious business to try to find the best for your purpose and at your price, and then always ordered it by its manufacturer's name or trademark, selling costs would come down. The maker of a good article could then get dealers everywhere to handle it, so you could buy it everywhere, and the dealers wouldn't want so much profit, because it would

move faster, and they wouldn't have to persuade buyers that it was good. The dealers now want from 33⅓ per cent. up to 50 per cent. profit on articles which are not "known." You must pay this, but if you are a good judge of values, and if you stick by something good once you find it, the manufacturer can compel dealers to accept less profit, and give you the benefit.

The manufacturers of these thousands of articles, from soap to pianos, must protect their good-will with users, and their problems of distribution are as perplexing as the work of a general handling an army of men. The woman, the consumer, must be protected, must be interested, must be held; and every woman will benefit by understanding the difficulties every manufacturer is up against, and particularly the important and vital part that every woman and homemaker plays in this drama of distribution — the getting of a good article from the factory to you in the most efficient manner.

Merchandising, the selling of goods, never reached any development until it attained the *one-price* idea. The old idea of selling, still

extant in the East, and some places in Europe, was to change the price of an article to every purchaser, depending on what the dealer thought the customer would stand. The one-price idea, largely developed by John Wanamaker and Marshall Field, means that the same article is sold at one price everywhere throughout the country, so that it is safe to send even a little child to purchase. *No standardized branded articles were possible without the one-price plan.* I emphasize this to show that standards of value depend on the continuation of the one-price plan, just as they were made possible only by the one-price plan. It is important for a woman to follow this, as it leads to the next point in the distribution story, which is the "fixed-price" and "cut-price" situation. When, in former days, every customer was at the mercy of the dealer, who might ask her 5 cents for soap, and the next customer 6 cents, there were, as I said, no standards of value possible. It means everything, then, to the woman consumer to help maintain this one-price idea, and support distribution policies which will continue the

one-price policy in which lies her safety as a shopper.

Let us follow the story of a well-known soap, for example, which sells at 8 cents for a large cake. Now, in order to make soap of this excellent standard, the manufacturers have laboured for years, and have established a large chain of factories. By effecting economies in manufacture, and because of the immense number of cakes sold, the manufacturers are able to give this excellent quality at this low price of 8 cents. They have found that 8 cents is the lowest price at which they can sell so good a quality and weight, and still make a profit. In order that you woman in Florida, or you woman in California, may buy this soap at 8 cents, they have a gigantic system of distribution with thousands of salesmen and jobbers who bring the soap to your door. They are backing this product with all their reputation.

Now let us suppose that you — our woman consumer — one day see in a drug store the notice that for two days this brand of soap will be sold at 6 cents. This looks like a great

chance to save pennies, and you immediately purchase several bars, and think you are an economical housewife. But let us see the inside result: This drug dealer, Jones, sold at this cut price for two days, *not* to give you the benefit of a penny saving; he used this cut price on a standard article, of known value and reputation, *merely as a bait* to lure you into his store, where he hoped you would buy other articles, like his own "private" brands, on which he knew he would make 40 or 50 per cent. profit.

In every case of price cutting on a standard article the dealer steals your regard and knowledge of these standard goods, and uses the cut price as bait to entice you to come to his store and buy other articles on which he will make a very high rate of profit. The well-known cutting of three cans of soup for a quarter, etc., made by grocery stores, is always a bait to have you enter, and later purchase tea and coffee, and their own brands of spices and extracts, on which they make an immense profit.

Let us follow our soap story farther. You bought several cakes at Jones's drug store, and

saved almost 10 cents. But there is another store kept by Brown down the street, and he sees that Jones has cut the price on the soap, and that Jones is thus attracting many customers into his store. What can Brown do? *He* must get up some bait to attract customers back, if he can. He sells this same soap for *five* cents, which may be below cost to him, merely to get you to enter *his* store. You see that Brown sells this soap for two days at 5 cents, and so you run back to trade at Brown's, etc., like a shuttlecock, and never consider the part you are playing in the whole matter. Now Brown may be able to cut the price to 5 cents; but the chances are he would lose too much money by so doing; so, instead, he says to the manufacturer, "I can't make enough money on this soap, because I can't afford to cut the price on it all the time. I am not such a big dealer as Jones." What is the result? Because he cannot afford to cut the price, Brown *refuses to handle the soap entirely.* Not only does Brown refuse to handle the soap, but hundreds of other Browns all over the country who cannot

afford to cut the price refuse to handle the goods.

What is the result? This manufacturer of good soap, who has spent money to establish it, and who gives you the best quality at the lowest price consistent with fair profit, is forced into one of two positions: either he must reduce the quality, or he must go out of business altogether, and in either case you are the loser. Instead of saving 4 cents, you have thrown a boomerang that, after a roundabout journey, comes back and hits you, and deprives you of the ability to buy standard products; and you, the woman consumer, are so much worse off. Instead of helping yourself to obtain standard articles, you have, by a petty "saving," destroyed the possibility of that manufacturer giving you a good product. The result is that you wonder whatever became of that fine old soap you used to use, and why there are so many brands that come and go all the time.

Every time you buy an article at a cut price you are registering yourself as an enemy, not a friend, of that article, for your action is the first

step toward driving it off the market. If you don't like the article don't buy it at any price; but if you like it, pay the price set on it, if you believe it's worth it. If you don't think it's worth the price, find another article which you think *is* worth the price asked; but don't be a party to "pirating" and "sandbagging" an article.

There is a great deal that intelligent housewives can do in this matter, for there are many hypocritical customs which ought to be wiped out. There are some articles which are purposely priced high, knowing the price will not be asked by dealers or paid. This is especially so in drug and toilet articles. One-dollar articles quite usually sell at 87 cents or somewhere near it; even as low as 67 cents. As a result we have three fourths of the drug stores calling themselves "cut-rate" drug stores, as if it were something to be proud of. All this is very hypocritical; why should there not be one right fair price to all, everywhere?

But this is not nearly so hypocritical or misleading and even fraudulent as the thousands

of retail stores which are continually advertising and selling "$15 suits at $9.98," etc. In most cases these suits are nothing more than ten-dollar va ues. Many millions of dollars' worth of goods are sold to consumers on misrepresentations like this. The only remedy, besides more laws against misleading and fraudulent advertising (such as New York and a few other states have), is the education of women as purchasers. They should study and be taught better how to judge values, and how much greater economy it is to pay a fair, regular price for only such articles as are of sure worth, and only when they are really needed.

There are some who would say that the shop windows and the advertising make women extravagant, but this is the wrong view. The shop windows and the advertising simply prove how tremendously efficient they are in *their* duty of *informing* us; it is then up to the housewife to do *her* part as efficiently by weighing values and considerations, and having the courage to say "No." A woman who is not able to do this is not nearly finished with her education

— she is driving the family and the nation into a wrong economic balance which makes panics, unhappiness, and lack of character and worth. To get this education about her proper relation, as the great purchasing factor in modern life, to the business world which makes and sells, is her most important duty as a home-maker.

Every now and then criticism is made of two things which are given the blame for the "high cost of living": the packaging of goods and advertising. But any woman may still buy, if she wishes, soda crackers, tea, or oatmeal in bulk. She may still buy in bulk *anything* also packaged, if she is ready to accept lack of freshness or cleanliness. It is all a question of values in her mind, and the cost of living need not be any higher because of packages *if she so decides.* If she decides for package goods, the reasons ought to be clear in her mind what she is gaining, and whether the higher quality of package goods warrants the difference in price over the bulk article.

The following are, in brief, the chief reasons

why package goods have appealed so strongly to the average woman as worth the extra cost:

(1) Greater sanitation in handling.
(2) Increased keeping qualities.
(3) More convenience in handling.
(4) Less loss in breakage.
(5) More accurate and responsible weighing.
(6) More definite standards of identity and responsibility.

As to advertising, it is simply a form of selling cost that is taking the place of other forms of selling cost now outgrown. A salesman who sells an advertised article doesn't have to call as often or as long on dealers to get orders; and the dealer, in turn, doesn't have to argue and explain so long to women, and thus is satisfied with less profit. Consequently, where it probably would take 500 salesmen to sell a factory's output of goods if no advertising were done, it takes only half or less that number when advertising is used, nor does it take so long.

Through advertising, you hear very quickly now when something new and good appears;

whereas without advertising you might never hear of it, for dealers don't like to buy things unless there is a "demand." It actually nowadays costs less, per article, to sell goods, if advertising is used to help, than if no advertising is used. The large quantity of advertising we see everywhere is simply taking the place of salesmen's bills for hotel and travelling expense, champagne for entertaining, and even bribes. Advertising is the more modern, clean, direct, and straightforward way of going right to the "ultimate consumer" and telling about the goods. There is still advertising waste and exaggeration and fraud, but it is being gradually but surely weeded out.

The great fact which both purchaser and seller is finding out is that frankness and square dealing pay in the long run, and that a fair price and a fair profit, guaranteed satisfaction and full confidence, benefit both parties to a transaction. Also that sometimes immediate, temporary, or personal profit should be sacrificed to the good of all, and to our own future profit. This brings us to the small versus the large dealer —

the big downtown store versus the small neighbourhood dealer.

Shall a woman go downtown to large department stores for articles which are cut in price, and give her small local dealer only such orders on which he can make little or no profit? The large department store must not be decried — it has a fine place in the community, if wisely used; but too often the woman consumer runs downtown for every so-called cut-price advertised by the "big stores," and yet expects her local dealer to drive over with a loaf of bread any time she wishes.

Is this fair, and how does it affect distribution? In the first place, the small local dealers everywhere, because of their greater number, are the ones on whom satisfactory distribution depends. You would be greatly inconvenienced without him. It is also the small local dealer who generally gives personal attention, which is lacking in big stores, and whose service is usually better than that of the large stores which are so large that they have imperfect mail and shipping service. It is not fair to buy locally

sugar and other articles on which there is little or no profit and then go downtown for other articles. It is this which is causing so many small retailers to fail every year, and which makes poor and inefficient retailers. It is actually more profitable in the long run, counting carfares, time, etc., to divide your trade generously with local retailers who can and will give you the personal consideration and quick service which more than outweigh a little difference in price.

One of the business things now discussed is whether or not small retailers should be able to buy at the same price as large stores, no matter how much the large store buys. The finest and most advanced manufacturers say, Yes. They say the "quantity price" to large buyers is unfair to the small man, and tends to drive all small dealers out of business, and they are refusing to give any quantity discounts. This is a problem in which the intelligent housewife should interest herself. It is my opinion, too, that quantity prices should be abolished. It will take away the temptation to run down-

town to buy an article a few cents cheaper, and will give the shopper as good buying advantages near home as downtown.

The whole aim of the woman consumer, as was pointed out before, is to insist and maintain standards in her purchasing. She can do this by insisting on one price; by understanding her position in the price maintenance situation, by patronizing the local dealer, and by thoroughly understanding the point of trademarks and brands and the evil of substitution. Right out of this matter of the small versus large dealer arises the difficult situation of the "private brand" of goods, which the woman must also understand to be an intelligent consumer.

No woman now can imagine the chaos existing a century ago when no trademark guarantee was placed on goods. The trademark is the identification, the guarantee of standards. The trademark represents that pride of quality behind the goods for which the manufacturer stands, and which he is willing to back with his reputation. The trademark is the guarantee to the consumer. The same motive that

prompted Cremona or Stradivarius as a name on a violin of quality prompts the responsible manufacturer to brand his goods. He wants to lift his goods above the low level of other merchandise of the same class.

A certain manufacturer makes baked beans; he spends years developing his process and manufacture to a high point; he spends money to advertise and interest you in his product; he gives it to you at the lowest price consistent with fair profit, and he adopts a design, name, or mark so that you can identify *him* as the manufacturer of this article upon which his whole reputation is at stake. If dissatisfied, and you fail to continue to buy and recommend his beans, he is lost — all his business is wiped out. Therefore you have a hold on him — you can strike back at him if he does not uphold a good standard.

But you have *no* hold on the manufacturer who won't put his name or trademark on his goods. You can't find him — there's no way of proving he made them, and he can therefore make goods as poorly as he pleases, as long as *somebody* will buy them from him.

Here comes in a distribution secret: the fact that there are numbers of big department stores and other dealers and wholesalers who are very fond of buying this anonymous kind of goods from manufacturers and *putting their own names* on it, to lead people to believe they make it. One manufacturer may make goods for six or a hundred such firms, and put six or a hundred different "private brands," names, and labels on the same kind of goods! These goods may sell at all kinds of prices — usually many times more than they're worth. These big stores and wholesalers prefer to sell "private brand" goods rather than goods bearing the manufacturer's trademark, simply because they make more profit on the private brand. You've got to trust the store instead of the manufacturer, and as the store has many other things to sell if you don't like this one article, it hasn't so much to lose, and isn't so particular about the quality of the article. The real manufacturer is anxious about *quality*, but the stores that distribute private brands care most about *price*.

It is another reason for encouraging the small

dealer, that he usually keeps many more goods which carry manufacturer's trademarks than the big stores downtown. He isn't so strong as the big store, therefore he knows he can't attempt to sell you so many "private brand," irresponsible goods, with only his own label on them.

The matter of standards again enters our next point of *substitution*. The woman pledged to accept and encourage standards of production will refuse to encourage substitution, because of which millions of dollars is lost annually for both the housewife and the manufacturer. Substitution is the effort of the retailer to offer some other standard article than that for which you asked. Every good article is followed by a crowd of imitators who camp on its trail, and who follow its trademark, imitating the name, the size, shape, colour and label as closely as possible. Every time a woman accepts an imitation she is harming the distribution of the good article, and lessening its sales, thereby decreasing the possibility of the continuance of the good article in the market.

Practically every time a woman accepts a substitute she gets less than what she asks for. She should never, on principle, accept a substitute, unless she is actually compelled to by circumstances. It is like throwing a train off its track. It interrupts and destroys the judgment of the purchaser, and cripples the whole distribution system, to say nothing of adding to the cost of living. It is a confession that your judgment is defective. It is possible that advertising has fooled you into believing an article good, but it is much *more* possible and probable that your dealer is trying hard to make 60 per cent. profit off of you, when the article you ask for offers him only 30 per cent. Advertisers who fool you can't stay in business very long — because you don't buy again when you find an article isn't good. An article advertised for a number of years is almost proof in itself that it is honest and good, because merit only, as a rule, can stand the test of time.

Women are still too fickle in their buying; too many are attracted by every new or different brand, and do not realize that because they do

not stick to articles of real merit, they seriously harm the distribution of good articles, and lessen the chance that good articles will be continuously manufactured for them. It is perfectly clear that good articles cannot be made as cheaply or efficiently unless there is a fairly guaranteed market for them. Big factories must be built, and cannot be abandoned without loss when women lose interest.

A whole chapter and a whole book could be written on the distribution of dress materials and clothes alone. The reason why clothing materials are so high is not because of tariff or high cost of manufacture — but because women are capricious and do not buy uniformly, and are swayed by hectic appeals or whims. If every manufacturer this moment knew within 15 per cent. just what, and how much, every woman would buy of the main supplies each year for three years, prices would come down with a thud, as much as 40 per cent.

Weavers of cloths have a terribly wasteful time every year trying to find out what women "are going to wear." Many make up 400 or

more kinds of weaves, knowing they will only sell in quantities about sixteen of them. *Which sixteen* — that's the rub! If women refused to follow radical styles, and did not waver toward extremes so often and suddenly, prices would be lower. It is not true that manufacturers manipulate styles — they'd be as rich as Crœsus if they could. Instead, most of them have a hard time making money. It's what you as a woman will do when various styles are put before you that counts. If we as women acted more firmly and unitedly in turning down most of the fashions, and were more willing, like men, to have our clothes look a little more alike, and to keep a good style longer, we could save a lot of money for other things, to say nothing of nerves and time and heartaches.

One other point remains: the relation of the woman as a householder to social justice. The most progressive manufacturers now realize that it is the best general business policy that the purchaser pay as small a price as is consistent with a fair return to capital invested and the cost of efficient distribution; and that a living

wage must be paid the worker in order to make a high grade standard article of best value to the consumer. No consumer can in the long run afford to buy cheap articles which are cheap because they were made in unsanitary conditions, or because the worker worked, under any conditions that degraded, overworked or stultified him mentally, morally, or socially. The largest manufacturers of the standard articles are the very ones who have done the most for the conditions of their workers. It is not enough that "welfare" work be done and "rest rooms," etc., be provided; it is much more important that wages be right, that intelligence and efficiency are properly rewarded, and that society is the gainer on a broad basis because of that industry's existence.

It is woman's privilege and duty as the possessor of the powerful weapon of purchaser that it be used to prevent social injustice. It is a very great and important step toward social justice when we insist that the goods we buy are made or manufactured under proper conditions. All of us in the long run can afford to

pay the needed price. To buy a bit of goods at a ridiculously low price, because some mother and father and some employer were willing to drain the youth and bloom of a little child, is social immorality and crime — when it isn't ignorance. The economic relation of woman to the rest of the world is a terribly real thing and a live responsibility.

CHAPTER FIFTEEN

EDUCATION AND THE HOME ECONOMICS MOVEMENT

Do you wish your daughter trained in woman's great work of homemaking, or will you be satisfied if she merely receives "culture," and studies only such subjects as latin, mathematics, languages, and music?

This is the big vital question which you as the average American mother are settling one way or the other, thereby determining how the education of the future woman will be planned. As intelligent mothers interested in the greatest happiness and success of your daughters, you ought to know what the present day educational situation is, so that you can help in bringing about the wisest course.

There are two kinds of opinions swaying the schools and colleges of the country to-day. One opinion says that your daughter should not

waste the precious limited amount of time she can spend in high school or college studying cooking, cleaning, and homemaking, which it says you can teach her, or leave safely to her "instinct" and general intelligence; such opinion believes that in this precious time in school she should get closer to the great minds of the ages, to the thinkers, poets, writers, and the history, art, and music of all time.

The other kind of educational opinion says that your daughter is a human being with a definite line of work in life, and that you owe it to her first of all to give her the best practical and theoretical training for her future life work. It holds that every woman is inherently a homemaker, and that the best thing you can do for her happiness or the welfare of society is to train her in this work of homemaking. This opinion holds that homemaking is not a simple kind of knowledge which can be left to chance, but that it is a serious, many-sided study, brimful of opportunity to apply the highest kind of knowledge, science, art, and all the ideals of culture and education.

These educators insist that your daughter will be a better wife and mother, a happier homemaker, if she is taught definitely *how* to apply her art, her literature, her biology, her chemistry, to the real problems she will have to face later as a homemaker. They ask, why teach art without showing her practically how to bring art into the decoration and furnishing of her home? They ask, why teach chemistry without teaching the chemical changes caused in cooking, and right and wrong combinations of foods? They ask, why teach psychology without teaching her how to train her children's minds? They ask, why teach botany without showing her how a knowledge of the development of the yeast plant will teach her to make good bread? They ask, why teach her sociology and economics without showing her how to manage her home finances, and her relation as a purchasing agent to the great world of business?

So we have a divided field of education to-day. Only 700 high schools, 100 normal schools, and 130 other educational institutions (out of a total of several thousand) teach home economics

to any degree. The rest still refuse to believe that any but purely cultural studies can mean real education, and think that our daughters can learn in their own homes all that is necessary about "mere housekeeping."

Now, in my opinion, the best course is, as it nearly always is, a middle course, or a combination of both opinions. We can teach cultural studies *and the practical work* of home economics without sacrificing the good value of either. Latin and a course in the chemistry of foods are not incompatible, and a well-planned course of four years should give ample time for the study of both. I believe there are most strong reasons for teaching home economics *as a science* either in college or the elementary schools.

First, modern conditions have made your home less and less a place where you can teach the things every woman should know. Modern manufacture has taken out of the home many of our old-time processes of canning, sewing, and cooking. It would not be possible for you, in many cases, to practically show your daughter how to do these things. Second, through eco-

nomic changes, young women often go out to work immediately after, or before, the completion of their high-school work, and have no time nor opportunity later to study these subjects in the home and must study them in the school, if they study them at all. Third, if you are wise, you will wish your daughter to know *more* than you know — old time methods and ideas are changing, and the school will teach your daughter new methods, tell her of new equipment, and inform her of the new housekeeping which means less drudgery and effort than you have put into your work all your life.

Last, by dignifying home economics as a *science*, and placing it on a level with other cultural studies, your daughter will learn to recognize and accept the dignity of housework and homemaking as she would never have learned it or accepted it in your own home kitchen. It is a fine antidote against the unnatural craving for "careers" and the reluctance to give attention to and take pride in those things which a woman's part in life makes it imperative for her to know, sooner or later.

Just what is this study of home economics, you may ask, about which we have been talking so much, and what do I think of the courses as they are taught at present? Let us study some definitions of home economics — first, that well-known one of Mrs. Richards, the "mother" of the home economics movement:

Home Economics stands for:

1. The ideal home life of to-day unhampered by the traditions of the past.
2. The utilization of the resources of modern science to improve home life.
3. The freedom of the home from the dominance of *things*, and their due subordination to *ideals*.
4. The simplicity in material surroundings which will most free the spirit, for the more important and permanent interests of the home and of society.

Home economics means, in general, the application of the sciences, the arts, and economics to the practical affairs of the family — to food, clothing, shelter, children, and finances.

In our grade schools we have certain branches of home economics in the *household arts* — sewing, cooking, cleaning, weaving of textiles, drawing, and manual training.

In our high schools we emphasize the *reason why*, and apply science and the arts to health, food, clothing, and shelter in a more advanced manner.

In our higher institutions of learning home economics teaches the *economic* side of the same subjects, the true economy of money, how to purchase, how to manage finances, the business side of homemaking, sanitation, decoration, furnishings and construction of the home.

Do not think that we have ideal education in home economics even to-day. Every woman's help is needed to make it still more practical and directly related to the work in the actual home. My most severe criticism of much of the work as carried on in many institutions is that the courses are often planned solely or largely from the professional view of those who are going to *teach* them. There is some basis for the jokes about domestic science students who

cannot run their homes efficiently after several years' training. This is because the work has been taken a little too far away from practical life, in many cases, and made merely a "cult." The work is not given by the teacher and received by the pupils as something to apply in their own homes — but merely as a course of study for school, and in school only, which they are following solely to qualify them for *teaching* some one else, and out of which to make a professional living.

Another criticism I have is that too often the equipment of the school, the foods used, and the ideas of service (especially in high schools) are entirely out of keeping with the standards and purse of the girl's family; and while she is naturally interested, she does not apply in her own home what she has learned in school, because conditions are so different; often, too, she thinks of cooking as something pleasant and fancy to do in the clean classroom with shining equipment; but she lays her knowledge aside when she leaves the school building, and does not take it home with her into a dingy and

inefficient kitchen, and try and change conditions at home into something better.

There is certainly great need to give opportunity for training in home economics to young women who wish to become teachers, as is done so splendidly at Pratt, Teachers' College, Simmons, and elsewhere; but my greatest ideal for domestic science education is that it shall be a part of every school curriculum from the grades up; that step by step, in advancing courses, all girls and young women shall study these branches with the view of practically developing these ideas in their present homes with their mothers, or in future homes of their own. We want not only trained teachers, but trained mothers; we want older women, all women, to be educated and to educate each other in these studies which raise the management of the home into woman's highest profession.

You will be interested as a woman in learning what a long struggle it has been to get even thus far in home economics education. It is almost laughable nowadays to note old records in which is registered the struggle for popular

education, particularly by girls, who, in 1790, were voted by the school board of Gloucester Mass., "two hours of daily instruction inasmuch as girls are a tender and interesting branch of the community, but have been much neglected in the public schools of the town"! Girls continued to be "tender and interesting females" for some time to come; and it was not until the founding of Catherine Beecher's School for Girls at Hartford (1821), and the establishment of various seminaries and academies, that the change from "females" to women was gradually begun.

Great social and economic changes in the home during the period of 1840 were brought about by new scientific discoveries and inventions, the building of railways, and the introduction of the telegraph and cable. This changed industrial attitude swept over the country and very considerably changed the ideas of prevailing education, which up to this time had been limited to a study of the classics for purely cultural ends, but which now became enlarged to include technical training for some career or

profession. The founding of Oberlin (1833) for both sexes; the beginning of normal schools in Lexington, Mass. (1839); the founding of the New England Female College (1842), all pointed toward this new idea of definite professional training for the teacher and the nurse.

The School for Girls, mentioned previously, founded by Catherine Beecher and her famous sister Harriet, had a great effect on the education of women; and in about 1840 Catherine published our first real domestic science book, "A Treatise on Domestic Economy," from whose preface the following interesting quotations are made, which show that Miss Beecher at even that early date quite anticipated the science of home economics of the present day:

> "The author of this work was led to attempt it by discovering in her extensive travels the deplorable sufferings of multitudes of young wives and mothers from the combined influences of *poor health, poor domestics, and a defective domestic education.* . . .
>
> "The measure which more than any other

would tend to remedy this evil is to place *domestic economy* on an equality with the other sciences in female schools. This should be done because it *can* be properly and systematically taught (not *practically, but as a science*), as much so as *political economy* or *moral science*, or any other branch of study; because it embraces knowledge which will be needed by young women at all times and in all places; because it is a branch of *study*, and because this method will secure a dignity and importance in the estimation of young girls which can never be accorded while they perceive their teachers and parents practically attaching more value to every other department of science than this. . . .

"When young ladies are taught rightly to appreciate and learn the most convenient and economical modes of performing all family duties, and of employing time and money; when they perceive the true estimate accorded these things by teachers and friends, the grand cause of this evil will be removed."

This most interesting work was used as a text-book for many years, and contains such chapter headings as, "Peculiar Responsibilities of American Women," "Healthful Food," "Clothing," "Cleanliness," "Domestic Manners," "Construction of Houses." It also contained a "Domestic Receipt Book," one of the first on the subject whose aim was to furnish an "original collection of receipts which shall embrace a great variety of simple and well-cooked dishes, designed for everyday comfort and enjoyment."

Owing to the Civil War, educational progress was somewhat delayed; the close of the war found many women without support who were forced to turn to some educational means to give them skill to become self-supporting; and hence the decade following the war was very productive in the establishment of various technical schools, the founding of Vassar (1865) being a distinct step in advance for the education of women. Education at this time became even more practical — drawing was introduced in the public schools and manual training created a country-wide interest and enthusiasm, and

was introduced in most large cities, first in St. Louis (1879). By this time it was quite evident that the industrial factor had stamped itself on education, and that the *why*, *the how*, and the *doing* of things were considered of equal importance with merely *knowing* — the new education depended not on the *head alone*, but on the *head* and *hands* working in coöperation.

In the West at this time (1870) a new kind of educational institution was established — the agricultural college — which was to give the greatest possible stimulus to the teaching of home economics, and to which it owes its real beginning and development. Most of these new Western institutions were coëducational, and this fact brought up the discussion as to whether woman was to follow the same identical lines of work as her brother student. Educators were divided in their opinions, but most of them inclined to some form of separate education. The agricultural college combined a training of practical preparation for life with some cultural training: the soil, the seed, the tree, and stock were studied from new angles. Subjects like

biology and chemistry, "dead" when taught in the old theoretical style, when approached from this new practical angle became transfused into richness, and could at once be related to life and modern processes. The woman student of these colleges saw that her brother studied chemistry not merely to acquire knowledge, but to use this knowledge later in his life-work. He wanted to know about steam, not empirically, but so that he could run an engine.

Women were thus taught to see that there could be "applied science" for women as well as for men; that the laws of heat could be well tested by the management of a kitchen stove; that chemistry of food was as important as the chemistry of the laboratory, and that biology with its lessons on bacteria and "dust-gardens" could be more richly interpreted in terms of better sanitation and handling of food in the home.

This led to the establishment in these colleges of various courses in "domestic training," in which the state university of Iowa was the first to lead with a course of lectures to junior girls

in matters connected with housekeeping (1872). Courses in laundry work, and cooking, where the girls prepared their own noon dinner, the nutritive values of food, and tests for food adulteration, followed. "The interest in the department of domestic economy has been constant and lively," the report of that year read, "and has not only given the students manual skill, but increased their respect for all branches of such labour and added dignity to that part of their life hitherto considered menial drudgery."

Kansas followed (1873); and Illinois in 1874 opened at Urbana the first high grade college course in domestic science in the world. In the report of Miss Lou Allen, the head of the work for years, she says:

> "With no precedent to guide, few or no textbooks on the subject, with an incredulous public opinion to contend against, the undertaking seemed formidable enough. The school has been the outgrowth of the idea that the rational system of education for women must recognize their distinctive duties as women —

the mothers, housekeepers and health-keepers of the world — and furnish instruction which shall fit them to meet these duties."

Illinois was followed by Iowa, and in 1895 there were ten agricultural colleges offering courses in domestic science. In 1905 there were thirty-six. The Secretary of the Department of Agriculture recognized the need of more text-books in the new science, and increased the number of nutrition publications, and in many ways by the organization of the farmer extension and reading courses, and the "Grange" work, carried the work of the agricultural colleges directly into the home.

In the East the home economics movement has always been more closely associated with the rise of cooking schools, and the introduction of sewing and cooking into the public schools. The New York Cooking School (1879); the first public school kitchen (1887); the public cooking demonstrations of Miss Parloa in Tremont Temple, Boston; the Boston Cooking School, with Mrs. Lincoln, and a long line of splendid

principals ending with Fannie Merritt Farmer of to-day, are only steps in the chain which introduced cooking and domestic science into our public schools of every grade.

No story of the home economics movement would be complete without mentioning Ellen H. Richards, instructor in sanitary chemistry in the Massachusetts Institute of Technology, who may be called the real "mother" of the movement, and who devoted her life to ceaseless work in its behalf. Mrs. Richards's long list of books, that famous "Cost" series and many others, showed the homemakers of a score of years ago that science and intelligent administration could raise the standards of home life, and develop Mrs. Richards's famous "fourth R of Right Living."

The movement is now rapidly widening, and correspondence courses, lectures, and books on the subject are multiplying. Women's clubs throughout the country, and various special associations, settlement workers, individual cooking lecturers, the household departments of large publications are all taking up the work

with good results. Recent individual work like that of Mrs. Patterson, of Colonia, who is helping solve the servant problem through the use of equipment and efficient housekeeping methods, the work of Mrs. Kirk of Cleveland, and other lecturers who are teaching actual housekeepers in these subjects, the fact that Pratt and other technical schools are now offering courses to housewives, are all hopeful signs that domestic science will soon cease to be the cult of a few, and become the knowledge and practice of the many.

Out of it all there is bound to come a wider spirit of real analytical interest, and therefore the betterment of all home conditions, so that the home, the "cradle of the nation," may be brought toward the efficiency standards at which all man's endeavours and activities are so zestfully aiming and working.

CHAPTER SIXTEEN

THE "APPLECROFT" EFFICIENCY KITCHEN

After studying for considerable time how the efficiency principles could be worked out in the home, it occurred to me that it would be excellent if I could have some definite place where I could continue these experiments, and study the "new housekeeping" in a practical way to meet the average American woman's needs. Doctors have clinics, farmers their experiment stations, and chemists their laboratories, and it seemed quite natural that women should have some place especially devoted to the working out of home problems. Many excellent domestic science laboratories exist, such as the "practice house" at Pratt Institute, Brooklyn, etc. But these laboratories are particularly for the student and not for the woman who does her own work or is engaged actively in managing a home.

I wanted some place where I could practically work out these "new housekeeping" ideas. I wanted a place where I could experiment on new devices, materials, and methods which might raise the efficiency of the typical American middle-class homemaker; I wanted my theories to have a practical test, and any writing that I did to be substantiated by actual work and comparison, and so I have developed in my own country home a small "Efficiency Kitchen."

Many "model kitchens" have been established with expensive equipment of the most up-to-date kind; but my object was not expensive devices or labour-savers, no matter how useful, but a kitchen whose fittings would be within the limits of a moderate income. Some enthusiasts on the labour-saving subject try to maintain that labour-savers solve the drudgery problem, and that no expense is too great in this line; but I know from personal experience and acquaintanceship with other women that the equipment of the kitchen on a moderate income must not cost more than a very moderate sum. Again, my purpose was to show what could be

done in a kitchen in which electric current and city conveniences were not possible; because while electricity is without doubt the best artificial servant of modern times, its use is available to only a very limited number of the population, and the cost of electric installation and its extensive maintenance at the present rate of current is prohibitive for the family of moderate means. Last, I felt that an efficiency kitchen which had to face the more difficult *country* problems would benefit a greater number of women than would a city kitchen, whose problems are less difficult.

The Applecroft Efficiency Kitchen, then, is not a model kitchen with expensive fittings, tools or equipment. It measures only 12 by 14 feet, a space small enough that no waste motion occurs between tasks. Double casement windows at the south and west let in a quantity of light upon the working spaces, and give the "long view" of outdoors so necessary to relieve the eye strain of the worker.

The kitchen itself is finished in light cream with white woodwork in a "flat" washable

paint, which insures sanitary handling, and which is most cheery, light, and cool. The floor is covered with a new pressed cork material impervious to grease and very soft to the foot of the worker. The arrangement of the chief equipment is after the manner of the efficient kitchen described in chapter three. Beginning at the south wall, there is, first, a kitchen elevator; next, between the windows, a kitchen cabinet, then the three-burner oil stove, and to the right a large serving table, under which is a three-hole fireless cooker. This finishes the equipment of Group I. On the other side of the room — Group II — is merely a double drain kitchen sink, with china shelves the whole length of the dining-room wall to the left of the sink.

The big central idea in the arrangement of the kitchen is to efficiently *route* the processes and work which go on there, in order to save cross-stepping, confusion, and energy. The same idea that is nowadays applied to factory layout — the moving of the work in one direction, process after process, with as little waste motion as

possible — was applied to the layout of the Efficiency Kitchen.

The refrigerator, kitchen cabinet, stove, and table are in one group, placed so that food from the icebox is placed on the cabinet table next to it, in preparation for cooking on the stove next to it, and lifted when finished from the stove to the metal-topped table next to *it*. From icebox all the way to the dining room is in one direction.

On the other side of the kitchen entirely, and moving in the opposite direction, is the clearing-away-process group. The sink, drain-boards, garbage disposal, and china closet are close together. The wheel-tray brings the materials from the dining-room, and the dishes are put through the process, all in one direction.

Smaller utensils are grouped with the large process to which they belong. Rolling-pin, graters, mixing spoons, and egg-beaters are near the kitchen cabinet; pancake turner, skimmer, and long fork are near the stove; colanders and potato-ricer near the serving table. A two-burner oven with glass door is used for all

baking; an improved colander can be screwed to the kitchen table; a bread and cake mixer are used when needed; a roll of paper toweling is over the table, where it is used for draining potatoes, croquettes, and doughnuts.

Some of the equipment is fairly expensive, but I am testing it to see if the labour saved justifies the expense. Such a piece is the kitchen elevator, which is really an icebox on pulleys, which can be raised and lowered through the kitchen floor to the cellar at the touch of a button. By this device I am able to keep foods in the cool cellar, and yet have them in the kitchen when I need them without the great loss of energy of running up and down the cellar steps. A wheel-tray with two large trays mounted on rubber tire wheels enables me to load all the dishes for a meal on it at once, so that one trip is all that is necessary to serve my meal from the kitchen to the dining-room. After the meal the wheel-tray is loaded with soiled dishes and pushed to the right of the sink, where it acts as a sink-table to hold them until washed. The kitchen cabinet, though fairly

expensive, I regard as the best step saver any woman can have in her kitchen. It is practically a complete pantry for the storage of current dry groceries and most of the pots and pans.

All the smaller equipment of the kitchen is aluminum, as I believe aluminum utensils are preferable to almost any other kind because of their lightness, lack of seams, and unusually more artistic shapes. Many of the utensils are very decorative, as I believe it is almost as valuable to have utensils and pans that are decorative as utensils and pans that are efficient. Around two sides of the kitchen is a shelf on which I have placed the especially decorative pitchers, Thermos jugs and casseroles, whose quaint shapes and beauty greatly enhance the appearance of the kitchen.

The fuels used in the kitchen are only kerosene in the three-burner stove, and alcohol in the emergency chafing-dish. With the fireless cooker, the portable oven, and the three-burner oil stove I have been able to cook satisfactorily and with great comfort for a family of five and

numerous guests. I banished the coal stove from the very beginning, because generally the fuel consumed is greater proportionately than the amount of heat produced. In addition, the ashes and dirt, not to mention labour, resulting from the use of coal, are not compatible with the highest efficiency. One of the problems of the kitchen is to find still more ways of utilizing the fireless cooker so that fuel and excess heat in the kitchen can be reduced to a minimum. By also using a triple-deck "steamer," and casserole serving dishes, the kitchen has been able to greatly reduce the labour of washing many pots and pans.

There are many other small pieces of equipment like the Thermos carafe, Christy mixing bowl, and an excellent Chatillon scale which make for efficiency in saved labour and expense; but the aim of the kitchen is to see how *few* utensils, pots, and pans are necessary to the average housekeeping. It is in the way tasks are done and their better planning that the kitchen seeks greater efficiency for the homemaker.

The objects of the kitchen, then, are to enable me to still more accurately standardize any household tasks; to enable me to test the various kinds, shapes, and materials of various utensils; to study the best arrangement and materials which can be employed, so that I can still more effectively assist women in their household problems. The work of the kitchen is not limited to the kitchen proper, but includes experiments in cleaning, cleansing devices and tools, and all processes connected with housekeeping and homemaking.

One of the chief developments of the kitchen is a complete list or file of the name of every manufacturer of every kind of equipment or labour-saving device for the home. The kitchen, in other words, aims to act as a clearing house between the manufacturer and the homemaker and to be "competent counsel" to the woman who is interested in increasing the efficiency of her housekeeping. Manufacturers, too, often care to have a practical test of their devices before they are put on the market; already several have received helpful criticism of their

products. And last, the experiments in the kitchen will serve as a solid basis on which to write articles and matter for publication, so that any work or new material will have the basis of practical testing in a real home under average home conditions.

CHAPTER SEVENTEEN

BIBLIOGRAPHY OF HOME ECONOMICS

In this chapter it is not possible to give but a partial list of books on this wide subject. Many excellent books were omitted because they were too technical or elaborate for use in the home. Such books were chosen as would appeal most strongly to the individual homemaker, and assist her to increase her knowledge, stimulate her interest, and raise the standards of her personal efficiency as a homemaker.

Farmers' Bulletins of the Department of Agriculture

These Bulletins can be obtained free, by writing for the desired number, to the Department of Agriculture, Washington, D. C. The following list is a partial one, which the author has found helpful:

No. 34. Meats, Composition, and Cooking
No. 142. Nutrition and Nutritive Values of Food
No. 391. Economical Use of Meat in the Home
No. 389. Bread and Bread-making
No. 413. Care of Milk, and Use in the Home

No. 128. Eggs and Their Uses as Food
No. 183. Meat on the Farm — Butchering, etc.
No. 203. Canned Fruits, Preserves, etc.
No. 121. Beans, Peas, etc., as Food
No. 363. Use of Milk as a Food
No. 298. Food Value of Corn and Corn Products
No. 256. Preparation of Vegetables for the Table

The Library of Home Economics

This library consists of the following twelve volumes, which can be purchased separately. Each book is written by a specialist, but very simply and plainly, so that these volumes are particularly valuable and helpful to the homemaker. They are published by the American School of Home Economics, Chicago, which maintains the best correspondence courses given at the present time in home economics, and which publishes other interesting literature. Price of set, $15.

1.	The House: Its Plan, Decoration and Care	Bevier
2.	Household Bacteriology	Elliott
3.	Household Hygiene	Elliott
4.	Chemistry of the Household	Dodd
5.	Principles of Cookery	Barrows
6.	Food and Dietetics	Norton
7.	Household Management	Terrill
8.	Personal Hygiene	Le Bosquet
9.	Home Care of the Sick	Pope
10.	Textiles and Clothing	Watson
11.	Care of Children	Cotton

Teachers' College Bulletins

Teachers' College, Columbia University, New York City, publishes the following helpful little bulletins and others at low price:

Hints on Clothing . . .	Price 10 cents	Woolman
Feeding of Young Children	Price 10 cents	Rose

Household Economics

The following books discuss home economics in a broad general way as well as entering into details:

The Home Economics Movement, Whitcomb and Barrows; Huntington Chambers, Boston; price $.75

This interesting little book discusses the Home Economics Movement and its introduction into the public schools and colleges.

Household Economics, Helen Campbell; Putnam & Sons, New York City; price $1.50.

This thoughtful book describes the building of the house, its decoration, furnishings; nutrition, cleansing processes, household service and organized living.

Home Economics, Maria Parloa; Century Co., New York City; price $1.00.

Miss Parloa was one of the founders of the Home Economics Movement. This book discusses household management, and is full of practical suggestions about the home.

The Art of Right Living; Whitcomb & Barrows; price $.50.

In this booklet, Mrs. Richards, the founder of the Home Economics Movement, shows the practical application of ideals of living, food, shelter, sleep, exercise, etc.

The Cost of Food, Richards; Wiley; price $1.00.

This is one of Mrs. Richards's famous cost series in which she gives valuable suggestions with regard to reasonable priced dietaries. It helps with special problems of the cost of food for the infant, the school child, etc.

The Cost of Living, Richards; Wiley; price $1.00.

In this volume Mrs. Richards surveys the whole control of family expenditures for better home life. The division of expenditures for various items, clothing, food, operating expenses, etc., are all treated with detail, and is of especial help to those with incomes of $1,500 or over.

The Cost of Shelter, Richards; Wiley; price $1.00.

This book treats of the relation of the house to housekeeping; the relation of cost of shelter and total income, and the problem of whether to rent or own.

The Cost of Cleanness, Richards; Wiley; price $1.00

This small volume treats of the clean house, the clean city, the cost of uncleanness, and shows the economic loss due to unsanitary conditions.

Accounts

How to Keep Household Accounts; Harper Bros., New York City; price $1.00.

This little book is full of good suggestions, and shows how to keep household accounts, explains how to start and keep a bank account, and contains other banking and business information for the woman spender.

The Woman Who Spends, Richardson; Whitcomb & Barrows; price $1.00.

This interesting small volume discusses somewhat theoretically woman's position as a consumer, and as a producer, and gives the home-maker some novel viewpoints.

Care of the Child

Care and Feeding of Children, Holt; Appleton, New York City; price $.75.

A book for mothers of young children, which in simple catechism form is most helpful, clear, and scientific as well, and which is probably the best single book for the mother of a young child.

Proper Feeding of the Family, Gibbs; price $.25.

This pamphlet is issued by the Association for Improving the Condition of the Poor, New York City, 105 East 22nd St. It tells in most simple way about foods, and how to prepare them, with specimen dietaries for the most moderate means, and for school children.

A Nursery Manual, Benson; Boercke & Tafel, New York City; price $1.00.

This is an excellent simple book for the mother, and is especially helpful in giving modified milk formulæ, and rules for care and treatment of the sick child.

The Daily Meals of School Children, Hunt.

This is a free pamphlet, No. 3, of the U. S. Bureau of Education, and gives excellent suggestions for making school lunches, which should be helpful to every mother of school children.

The Baby; Rose. Free pamphlet in the Cornell Reading Course, published at Ithaca, N. Y.

Tells just how best to wash, dress, and care for the baby.

Feeding of Young Children, Rose; Teachers' College; price $.10.

A bulletin which gives simple meals for the child from 2 to 6 years, and which is suggestive and practical.

Children's Diet in Home and School, Hogan; Doubleday, Page & Co.; price $.75.

Is a helpful guide in preparing the best meals for children.

Cookery

Home Science Cook Book, Lincoln & Barrows; Whitcomb & Barrows; price $1.00.

This very practical and reasonable cook book treats the dishes of breakfast, lunch, and dinner in an interesting way. It gives general principles for many dishes, and is a cook book which would be particularly good for the young housekeeper.

Boston Cook Book, Lincoln; Little-Brown Co., Boston; price $2.00.

How to make staples, such as soup, bread, etc., with short discussion of foods and diets for invalids, is included in this sensible book.

Practical Cooking and Serving, Hill; Doubleday, Page & Co., Garden City, Long Island; price $1.50.

A comprehensive book, well illustrated, and valuable.

Hostess of To-day, Larned; Scribners, New York City; price $1.50.

This gives excellent suggestions for menus, with cost of recipes; especially suitable for well-to-do homes.

Cooking for Two, Hill; Little-Brown Co., Boston; price $1.50.

Excellent book of recipes and dainty dishes for the very small family.

Boston Cooking School Book, Farmer; Little-Brown Co., Boston; price $2.00.

All of these books by Miss Farmer are splendidly illustrated, well written and clear, with most reliable recipes.

Foods and Cookery for the Sick, Farmer; Little-Brown Co. $1.50.

New Book of Cookery, Farmer; Little-Brown Co., $1.50.

Chafing Dish Possibilities, Farmer; Little-Brown Co.; $1.00.

How to Cook in Casserole Dishes, Neil; David McKay, Philadelphia; price $1.00.

This very well illustrated book shows how to prepare foods economically and more appetizingly with the aid of the casserole, which should be a method of cooking practised in every American home.

The Fireless Cook Book, Mitchell; Doubleday, Page & Co., Garden City, Long Island.; price $1.25

This book tells all about the wonderful fuel-saving fireless, and includes two hundred and fifty recipes, and twenty drawings, with full explanations how to use this great boon to the housewife.

Housewifery

The Care of the House, Clark; Macmillan, New York City; price $1.50.

This is a clear and comprehensive treatise of the house, its materials, woodwork, and care of plumbing, lighting and heating.

The Complete Housekeeper, Holt; Doubleday, Page & Co.; price $1.00.

This is a large and excellent work on the whole matter of housekeeping, the care of every department of the home. It is a practical guide as to how to clean, wash, renovate and preserve the different materials and objects in the home.

Cleaning and Renovating at Home, Osman; McClurg, Chicago, Ill.

This is a compendium of all the processes of cleaning and renovating that may be carried on at home.

The Fuels of the Household, White; Whitcomb & Barrows; price $.75.

This is a small book designed to instruct the young housewife in the use of the fuels of the home.

The Laundry, Rose; Cornell University Bulletin, free.

Practical helps and discussions of laundry questions.

Laundry Work, Sheppard; University of Minnesota; price $.50.

Small but good discussions of laundry problems.

Approved Methods of Home Laundering; Proctor & Gamble, Cincinnati, Ohio; free.

Although it mentions the various soaps of the company, it is an excellent booklet

Bulletins of the Bureau of Entomology

These can be obtained free by writing the Department of Agriculture, Washington, D. C., of which L. O. Howard is chief.

The True Clothes Moth. Circular 36.
The Bed Bug. Circular 47.
House Flies. Circular 108.
House Flies. Circular 71.

Cornell Reading Course for the Farm Home.

Several of these excellent bulletins have been mentioned under their proper heads. Write for further information to Martha Van Rensselaer, Ithaca, N. Y.

Health League Booklets

113 Devonshire St., Boston. These are twenty short and helpful booklets which will be sent on payment of a

$1.00 annual membership in the League. Some of the subjects are Meat and Drink, Care of Little Children, Microbes, etc.

Bulletins of Professor Barnard at Darien, Conn.

Professor and Mary Barnard for years maintained a unique Household Experiment Station at Darien, Conn. Many excellent bulletins, such as, "Cooking with Denatured Alcohol," "Comfort in the Kitchen," etc., were formerly issued by him. The plans of the station have changed somewhat, and the author's last advice was that bulletins were no longer to be issued. But Professor Barnard devoted many years to improving the standards of housework, and a debt of gratitude is due for his pioneer work in raising homemaking to a professional standard.

THE END.

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