Ontario Department of Agriculture

HAND BOOK

Women's Institutes

HAND-BOOK

FOR THE USE OF

Women's Institutes

IN

ONTARIO

COMPILED BY

G. C. CREELMAN, SUPERINTENDENT OF FARMERS' INSTITUTES

DEPARTMENT OF AGRICULTURE

TORONTO

CONTENTS

WOMEN'S INSTITUTES.

RULES AND REGULATIONS.

1. The formation of Women's Institutes shall be permitted, one for each district as given in Schedule "A" of the "Act and Rules Governing Farmers' Institutes."

2. The organization meeting may be called by the Superintendent of Farmers' Institutes, by the head of a municipality, by the president and secretary of the local Farmer's Institute, or by any five ladies of the district. At least two weeks notice shall be given by advertisement in two newspapers published in the district, or by placard, in which shall be stated the object, time, and place of meeting.

3. The objects of Women's Institutes shall be the dissemination of knowledge relating to domestic economy, including household architecture, with special attention to home sanitation; a better understanding of the economic and hygienic value of foods, clothing and fuels, and a more scientific care and training of children with a view to raising the general standard of health and morals of our people.

4. Each Women's Institute shall be in affiliation with the Farmers' Institute in the district.

5. Each Women's Institute shall receive a grant of $10 00 annually from the Department on condition that an equal sum be granted by the County Council or municipalities in which the Institute is organized, or from the local Farmers' Institute, and on such further conditions as are imposed by the "Act and Rules Governing Farmers' Institutes."

Branch Institutes.

6. Branch Institutes may be organized in any district for the purpose of holding meetings and otherwise carrying out the aims and objects of Women's Institutes. See Clause 3. As many Branch Institutes may be established in a district as are necessary to accommodate all parts of the district; and such Branch Institutes may be formed at any time with the consent of the executive committee of the District Women's Institute.

7. The officers of a Branch Institute shall consist of a local President and Secretary-Treasurer.

8. It shall be the duty of a Secretary-Treasurer of a Branch Institute to report once a month to the Secretary for the District, giving an account of each meeting held, a copy of the programme and a list of the names and addresses of all new members. She shall also prepare a financial statement of the Branch, have it signed by the local President and mailed to the Secretary-Treasurer for the District at least one week previous to the annual meeting in June.

9. All membership fees collected by the officers or directors of a Branch Institute shall be retained by the said Branch for the purpose of carrying out the aims and objects of Women's Institutes as prescribed in Clause 3.

10. In addition to the annual meeting, each women's institute shall hold at least four meetings, each year, at which papers shall be read and addresses delivered dealing with topics as set forth in clause 3.

11. Each member of each women's institute shall receive each year a copy of one or more publications dealing with some subject set forth in clause 3.

Organization of Institutes.

12. One institute may be organized in each District of the Province, exclusive of cities, or in such other divisions as the Lieutenant-Governor-in-Council may authorize.

13. As soon as organization is completed, the Superintendent shall be notified and the names and addresses of the officers and directors shall be forwarded to him.

14. All memberships shall terminate the 31st December of each year. (See Clause 51.)

15. Each institute shall be known by a distinctive name.

Officers.

16. The officers shall consist of a president, vice-president, and secretary-treasurer, and one or more directors from each municipality included in the institute district, except new or thinly-settled districts, when directors may be elected irrespective of the municipalities. The president, vice-president and directors shall be elected annually, and together with the secretary-treasurer shall constitute a board of directors

17 There shall be an executive committee composed of the president, the vice-president, and the secretary-treasurer

18. There shall be elected annually two auditors, to audit the accounts of the institute.

19. If the secreary-treasurer resigns, or for any cause does not perform the duties of her office, or if she remove from the district, the president shall immediately issue a letter calling the officers and directors together, giving each at least ten days' notice In the meantime the president shall perform the duties of the secretary-treasurer. At the time and place appointed, the officers and directors present shall appoint a secretary-treasurer. In case the presidency is vacant, or the president does not take action within ten days, the vice-president shall assume the power of president Other vacancies shall be filled in like manner

20. Any change in the personnel of the executive or directorate shall be reported to the Superintendent forthwith.

Annual Meeting.

21 The institute year shall begin June 1st and end May 31st.

22. The annual meeting of each institute shall be held on some date to be selected between the 1st and 20th of June of each and every year.

23 The newly elected board of directors shall take office at the close of the annual meeting The old board shall remain in office until this time.

24. Each year a meeting of the directors shall be called by the secretary to meet some time before the 1st of May. The special business of this meeting shall be to arrange for holding the annual meeting.

25. If it is thought desirable by the directors present at this meeting that a delegate or speaker be in attendance at the annual meeting, the same may be arranged for through the Superintendent, in which case the local institute shall pay the actual travelling expenses of the delegate or speaker from the time he or she leaves home until he or she returns thereto.

26. If it is decided that a request be sent to the Superintendent for a speaker to attend the annual meeting, the directors shall in addltion, select the place for holding above meeting, the date being selected by the Superintendent, as in the case of winter meetings If, however, it is decided *not* to ask for a speaker through the Superintendent, the directors shall select both date and place for holding annual meeting, conforming with clause 22.

27 A full report of this directors' meeting shall be forwarded by the secretary to the Superintendent on or before the 1st of May.

Business at Annual Meeting.

28. At the annual meeting the directors and auditors shall be elected for the ensuing year (See Clauses 16 and 18)

29 At the annual meeting the method of election shall be by ballot or otherwise, as decided by the members present No person shall be eligible for office, or be entitled to vote at the annual or any other meeting, who has not paid her fees in full for the current membership year

30 At the annual meeting members may suggest points in the district where institute meetings may be held during the succeeding institute year, first as to regular and secondly as to supplementary meetings.

31. At the annual meeting the executive officers for the past institute year shall, through the secretary-treasurer, present to the meeting in writing a carefully prepared report of the proceedings of the year, in which shall be stated the number of institute meetings held since the last annual report, the attendance at each session, the total number of papers read and addresses delivered, and a statement of the financial condition of the institute The financial statement shall first be audited and certified thereto by the auditors

32 The annual meeting shall be devoted to the business of the institute as specified in clauses 28, 29, 30 and 31, and in carrying out the "Programme of the Annual Meeting" and in considering ways and means whereby the institute can be improved

33. The annual meeting shall be advertised by mailing to each member, at least ten days before the date thereof, an announcement calling the members together. Said announcement shall specify the date, place, and hour of meeting, and shall contain a programme of said meeting. If the executive deem it in the interest of the institute, posters and newspaper advertising may also be employed to make this meeting publicly known.

Order of Business for Annual Meeting.

34. (1) President's report.
(2) Discussion thereon.
(3) Report of the executive presented in writing by the secretary-treasurer.
(4) Auditors' report presented in writing.
(5) Suggestion of points at which to hold meetings.
(6) Election of directors ; election of auditors.
(7) Suggestions as to how the institute can be improved or made more useful, if this has not already been considered by the president in her opening address and in the discussion following.
(8) Addresses, etc.

35. At the close of the annual meeting the new board of directors shall meet and elect from among themselves a president and a vice-president, and shall finally decide at what points in the district regular and supplementary meetings shall be held during the current institute year. The points selected shall be entered on page C of the secretary's minute book, and a copy of this page shall be sent to the Superintendent and shall be considered as part of the report of the annual meeting.

36. The board of directors shall, at the close of the first annual meeting, and when afterwards necessary, appoint from among themselves, or otherwise, a secretary-treasurer, who shall remain in office during pleasure.

37. In case an institute shall, through any cause, fail to hold its annual meeting within the time specified, the Superintendent may appoint a date for holding same, the meeting to be called as provided for the regular annual meeting, and this meeting shall, in all particulars, be taken as the annual meeting of the institute.

Board of Directors.

38. The board of directors, under these Rules and Regulations, shall have full control of the affairs of the institute. They shall arrange time and place of meetings when not otherwise arranged for, and shall outline the work and policy of the institute.

39. The directors of each local institute shall convene each year in the month of April for the purpose of arranging for the annual meeting. At this meeting the order of business shall be as follows :

(1) Selection of place for holding the annual meeting.
(2) Shall a request be sent to the Superintendent for a delegate to attend the annual meeting ?
(3) If it is decided *not* to send a request to the Superintendent for the services of a delegate, the directors shall select a date on which to hold the annual meeting, which shall be between the 1st and 20th of June. (See Clauses 22, 24, 25, 26).

Executive Committee.

40. The executive shall carry into effect the plan of work decided upon by the board of directors and shall arrange the details of the same. (See Clauses 17 and 60).

NOTICE OF MEETINGS.

41. A meeting of the directors or of the executive may be held at any time, provided one week's notice by letter be given to each director, in the case of a directors' meeting ; and a similar notice to each executive officer in case of an executive meeting Meetings of the executive officers or of the directors may be held on shorter notice, provided each director or executive officer be otherwise notified and agrees thereto. (See Clause 33).

DUTIES OF OFFICERS.

President.

42. It shall be the duty of the president to preside at all meetings of the board of directors and of the executive committee. In the absence of the president, the vice-president shall preside, and if both are absent a chairman shall be appointed by the committee.

Secretary-Treasurer.

43. The secretary-treasurer shall have the powers of a managing-director, acting under the control and with the approval of the executive.

Secretary.

44. It shall be the duty of the secretary to call meetings of the executive committee and board of directors, upon the authority of the president, or any two officers or directors, to give notice of all meetings as required by these rules, and keep correct minutes of the proceedings

45. All official correspondence relating to the institute shall be conducted by the secretary or in the name of the secretary.

46. In all correspondence relating to the institute, the name of the institute shall be given in full after the signature of the officer, except in cases where an official heading is used, giving the name of the institute.

47. All reports and returns required by the Superintendent shall be made upon forms especially provided and in the manner indicated.

48. The secretary shall keep a book in which shall be entered the names and addresses of members in alphabetical order.

49. It shall be the duty of the secretary to prepare and submit to the executive the annual report as set forth in clause 31, and to present the final report to the annual meeting.

50. Not later than the first day of July of each and every year, she shall forward to the Superintendent by registered mail, or otherwise, copy of said report, together with a copy of the financial statement, and the name and address of each officer and director elected for the ensuing institute year.

51. On or before the 10th day of January of each year the secretary shall send a revised list of members for current membership year to the Superintendent, and on or before the 10th day of each succeeding month she shall forward the name and address of each additional person who has since the previous return become a member of the institute.

52. Within one week after the close of each institute meeting or series of meetings the secretary shall forward to the Superintendent a

detailed report of said meeting or meetings, in which shall be stated the name of the place or places where sessions were held, the number of persons present at each session, the name and address of each person who read a paper or gave an address, the title of the address or paper, and a comment upon its value, whether good, fair or indifferent. (Use form A of secretary's minute book for making returns required by this clause).

53. On or before the 1st day of May the secretary shall report to the Superintendent.

(1) The name of place selected for holding the annual meeting; also the name of the hall in which it will be held.

(2) The decision of the directors as to whether or not they wish the Superintendent to arrange that a speaker address their annual meeting.

(3) The date chosen for holding the annual meeting if section 2 is decided in the negative.

54. The secretary shall, when possible, retain the manuscript of all papers read at meetings of the institute by local talent, in order that she may, when required, furnish the Superintendent with the same. Each institute is required to forward at least two such papers each year, which may be published as the Superintendent decides Secretaries or essayists are not required to rewrite papers before sending them to the Superintendent; forward them as read at local meetings

55. All reports, names, post office addresses, etc., should be written in a plain, legible hand, or they may be typewritten

Treasurer.

56 It shall be the duty of the treasurer to receive and account for all moneys belonging to the institute, and disburse the same under the instructions of the executive, without whose order no money shall be paid out. She shall also prepare in detail and present to the annual meeting a duly audited statement of receipts and expenditures

57 She shall use such cash and receipt books, membership tickets, etc., as may be required by the Superintendent

58 The funds of the institute as received by the treasurer shall, when possible, be deposited in a chartered bank to the credit of the institute

Directors.

59 Each municipality in the district shall be divided annually between the directors representing the same, whose duty it shall be to make a thorough canvass for members each year This division of territory shall be arranged at a directors' meeting held immediately after the close of the annual meeting.

60 As soon as it is decided to hold an institute meeting in a municipality, the directors elected to represent that municipality shall form part of the executive committee, until after the close of said meeting The duties of the said directors shall be to assist (to the best of their ability) the other members of the executive, to the end that a successful meeting may be held in their municipality

61. It shall be the duty of the officers and directors to be present at the meetings of the institute An officer or director who has not during the current year attended the meeting held in his municipality (except when prevented by sickness , or otherwise rendered valuable assistance to the institute, shall not be eligible for re-election to office for the ensuing year.

62. Every officer and director shall promptly answer all official communications addressed to her by the Superintendent, and should make diligent efforts to furnish any information required of her relative to the affairs of the institute.

63. The officers and director shall act as far as practicable upon the recommendations of the Superintendent, and shall submit to her through the secretary all questions relating to the welfare of the institute upon which advice may be required.

Expenditure of Institute Funds

64. All money received, whether as members' fees, legislative grant, grant from the county councils or from municipalities, or otherwise shall be spent within the district in which the institute operates: (1) To defray actual expenses of meetings such as are heretofore described: 2) To employ suitable persons to address said meetings ; (3 To assist in circulating agricultural, horticultural, and dairy literature or periodicals among the members, or to establish a circulating library for the use of members ; (4) To remunerate the secretary and others for services rendered.

Quorum.

65. At all meetings of the institute or the officers, if duly advertised as set forth in these rules, ten members shall form a quorum to do business at an annual or other general meeting At a directors' meeting five shall be a quorum. At an executive meeting, two shall be a quorum. If at any meeting a quorum is not present, those present shall adjourn, and the meeting shall again be called as prescribed by these rules. (See Clauses 33 and 41)

General Rules.

Any change of address or any failure to receive the bulletins and reports issued by the Agricultural Department should be reported immediately to the Superintendent.

The names of all officers and directors shall be included in the list of members

66. The blank books used shall be those authorized by the Department Blank forms for reports of meetings, financial statements, lists of members, membership books, mailing books, cash book, etc , may be had from the Superintendent

67. All institute returns shall be made to the Superintendent

Order of Meetings.

68. (*a*) Except by permission of the presiding officer, no member or other person shall speak other than to ask a question or to introduce or speak to a motion.

(*b*) In the discussion following the introduction of a subject, no person shall speak more than twice, nor for a longer time than five minutes, except by a vote of the meeting.

(*c*) When a question is under consideration, no motion shall be in order except the following : 1, to adjourn ; 2, to postpone; 3, to amend ; these motions taken precedence in the order named, and the first two shall be decided without debate.

(*d*) Before the vote is taken on any motion or amendment, the president shall ask : "Is the meeting ready for a question?" The question shall not be put so long as any member desires to speak and is in order. Any member desirous of asking a question on the subject introduced may do so verbally, but if she desires to ask more than two questions she must submit them to the secretary in writing.

69. Every member is entitled to the following privileges :

(*a*) To protest against any decision of the institute, and request her objection to be recorded in the minute book.

(*b*) To protest against the decision of the chair and appeal to the meeting, stating the grounds of appeal, which shall then be put without debate in these words : "Shall the decision of the chair be sustained?"

70. A motion to reconsider any question decided by the institute shall be in order, providing such a motion be not made on the same day on which the resolution is carried.

71. Order of business for general meetings other than the annual :

(1) Calling the meeting to order by the president.
(2) Reading and disposing of communications.
(3 Reports of committees.
(4 Programe of the day and discussion.
(5) Question drawer.
(6) Adjournment.

Legislative Grants.

72. The reports of the annual meetings must be sent to the Superintendant, not later than July 1st. As soon as these have been completed in satisfactory form, the Superintendent will notify the Minister of Agriculture, and the legislative grants will be paid as soon as convenient. If all reports are made out and forwarded in accordance with these instructions, the officers will receive the grants about August 1st, or within a few days thereafter.

Circular Letters.

73. The Superintendent's communication to institute officers is principally by circular letter. These circular letters always contain recommendations of a Provincial nature. All the plans proposed may not suit every institute, but institute officers are expected to carry out suggestions which are best suited to their district. The Superintendent is a director on each local board. As he cannot meet with each institute he uses circular letters to do his part of the work. Very frequently questions asked by institute officers are answered in these circulars. When sending out a circular to the secretaries, the contents of which should be known to the directors, he always sends a copy to each director. He does this to

lessen the secretary's work and to help him and his directors. This plan has worked very well.

Because he has done this some of the secretaries have thought he had not confidence in them. This is not the case. His long experience as secretary of associations has taught him that much more work can be done, and done much more cheaply, by correspondence than in any other way. When it is necessary for the directors to be called together to consider an important question they should be supplied with the facts at least a week before they meet. When they come together thus advised, they can discuss matters intelligently. If the Superintendent did not send copies of all circulars dealing with institute work to each director, the local secretary would have to do so. If the Superintendent does this it saves the secretary the trouble.

Suggestions to Officers of Women's Institute.

There is no general system regarding the payment of secretaries and other officers. Some institutes are paying an ample sum for services rendered; others are paying too little. This is a matter that must be left entirely in the control of the local officers; yet it is desirable that if possible a uniform system be adopted throughout the Province. The following plan is respectively suggested:

If the institute has a membership of fifty, that the secretary receive $10 annually and all legitimate expenses while attending meetings, whether of the institute the directors or the executive officers. In addition to this she may receive $5 for each additional 50 persons who join the institute. By this plan an institute with a membership of 200 will pay its secretary $25 net for her services. As a rule the success or failure of an institute depends on the secretary. If an institute has a good secretary, it will flourish; if the secretary is not up to the mark, the institute will sooner or later go to the wall; therefore the best available woman should be chosen for this position and she should be liberally dealt with.

Many of the presidents and directors are now doing a good deal of work for which they receive no remuneration; and they often have to pay their own expenses. It is not necessary for the directors to meet frequently; probably once or twice a year is often enough, viz., just before and just after the annual meeting; but the executive officers (see Clauses 17 and 60) should meet much more frequently; and if the funds of the institute will allow of it they should be paid their actual expenses when attending meetings or when engaged in institute work.

In order to increase the membership and interest each district should be canvassed annually as provided for in Clause 59. In order to meet the expenses of each director so engaged, a commission of 25 per cent may be allowed on each subscription taken by her in the section of the township she represents. In a thickly settled district an industrious woman should take at least twenty names a day. Her commission would be $1.25.

Officers whose expenses are paid otherwise than by commission, should be required to exercise strict economy. A statement of all such expenses should be presented in detail at the annual meeting.

If an officer's expenses are paid while attending a meeting, she should not be allowed commission and expenses also.

This system has been laid before the officers of most of the Farmers' Institutes in the Province, 80 per cent. of which have endorsed the principle. Others oppose it, but none has suggested a better method.

The objections to this plan, are recognized but a better method has not been discovered though, diligent enquiry has been made The percentages, etc., given above are used as examples only. Institutes which adopt the plan of paying secretaries, etc., should fix the percentages, etc., according to local conditions.

Posters and programmes should be printed in the most attractive manner possible. Each institute should adopt and constantly use a certain color of paper, ink and a certain typographical arrangement which would soon become familiar to the people, and therefore recognized and noticed wherever seen. Red ink on white paper makes a bill noticeable. The bill and the programme should each give, as far as possible, the same information, and the typographical appearance should be the same, the only difference being the size of the type and the size of the paper used.

The most desirable size for the poster is about 22 inches long by 16 inches wide. The paper used for posters should not be lighter than 50 pounds to the ream, nor more than 60 pounds; the latter is the best weight. When tacked to a wall or pasted on boards bills of this weight last much better than lighter ones. They are stiffer and hang better from a cord when put up in stores.

Programmes should be printed on paper 50 pounds to the ream, and may vary in size from 5 x 11 inches to 6 x 12 inches, according to the size of the sheet from which they are cut. Sheets of this size printed on one side only will be found cheaper and just as useful as smaller folders printed on both sides.

Some institutes have found it profitable to put advertising on the back of programmes Not less than one dollar per inch should be charged for advertising on back of programme when the edition numbers 500, *i. e.*, a programme 10 inches long and 500 in number should net the institute $10 if sold to advertisers. If the numbers of programmes is more than 500 or less than 500, the price per inch should be proportionate Never accept advertising from any but reliable parties, making or selling first-class goods or stock.

When an officer or director is canvassing for members, each should take with her a complete set of the publications sent free to members during the past year. By showing these or the ones the person canvassed is most likely to be interested in, many more subscriptions can be obtained.

Each person becoming a member should be given an annual membership ticket or badge, the latter preferred. When badges are used each member should be requested to wear same whenever she attends institute meetings. This will tend to advertise the institute, and will make more easy and effectual the work of those selected to canvass the meeting.

A sample Member's Card has also been asked for. That given below is a very good form :

FRONT

South Ontario Women's Institute

190

Members' Ticket

25 Cents

M.....

Sold by.....

MRS. J. B. MITCHELL, Secretary.

BACK

Each Member is entitled to such Reports and Bulletins interesting to women, as are issued annually by the Ontario Department of Agriculture. If one or more such reports are not received during the year, kindly communicate with

G. C. CREELMAN,
Superintendent of Farmers' Institutes,
Parliament Buildings,
TORONTO, ONT.

SPECIMEN PROGRAMME FOR TEN MEETINGS.

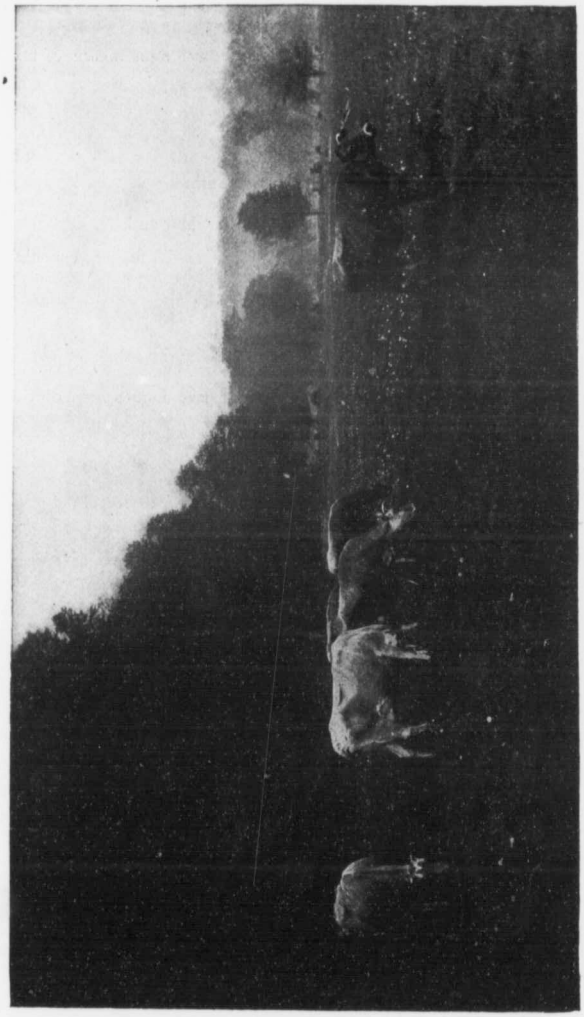
"The prosperity of a nation depends upon the health and morals of its citizens, and the health and morals of the people depends mainly upon the food they eat and the homes they live in."

MRS. E. H. RICHARDS.

1. The value of fruits as food ; their use in our diet.
   Desirable variety of apples ; their keeping qualities.
   Apples for the family table.
2. Fowls as food.
   Selection and care of hens for eggs.
   The selection and care of hens for the table.
3. The entertainment of the guest.
   Duties of the guest to the host and hostess.
   What the hostess gains by entertaining.
4. The cost of living. Wastes through injudicious buying.
   The household share of the income.
   Allowances for children.
5. Fresh air *vs.* doctors' bills.
   Heating and ventilating ; value and cost of the different methods.
6. Domestic help ; their treatment and training.
   Domestic help ; their duties and rights.
   Table service.
7. House cleaning.
   Insect pests of the house.
   Labor-saving appliances.
8. The food value of vegetables—succulent and nitrogenous.
   Summer vegetable garden on the farm.
   The preparation of vegetables for the table.
9. The disposal of garbage and waste.
   Care of the back yard.
   Cellars—their uses and abuses.
10. Ice—its source and dangers.
    Frozen foods ; their composition and value.
    The making and serving of ice cream and ices.

SPECIMEN PROGRAMME FOR TWENTY MEETINGS.

1. Yeast—its history and growth.
   The making of good bread.
   Other use of bread dough.
2. Our kitchen costumes.
   The plan and arrangement of the kitchen and pantry.
   What to do when unexpected company comes.



The Dairy Herd in an Ontario Pasture.

3. Nut and fruit salads.
Pictures and their uses.
Assignment of special duties to children as a means of teaching them responsibility.

4. How to wash and iron.
Clothes ; their care and repair.
Labor-saving appliances.

5. The food value and the dangers of milk.
Home influence on the young.
Linen and its care ; how, what, and when to buy.

6. The cleaning and sterilizing of household dishes, especially for milk.
The bathroom, storeroom, and closets.
How and when to rest.

7. The preparation of winter vegetables for the table.
Sunshine as a disinfectant.
Requisites of the sick room ; its conveniences for isolation and for nursing.

8. The value of cereals as breakfast foods.
Conversation at the table.
Carpets—their manufacture and selection.

9. The use of fish as food.
Influence of cheerfulness upon digestion.
The care of glass, silver, and china.

10. The use of cheese as food.
Daily and weekly programme of work.
Sweeping and dusting.

11. The cost of various foods in proportion to their nutrients and their energy.
Simple meals, well cooked and nicely served ; their refining influence.
The rights of parents and the rights of children.

12. Animal and vegetable foods—their comparative use, value, and cost.
House plants.
The furnishings of the guest chamber.

13. The cooking of eggs.
Wastes through injudicious buying.
The care of beds and bedding.

14. The selection of meats in the markets ; best ways of cooking each cut.
Periodicals for the family.

15. Pies—their value and their danger.
Home duties of girls and home duties of boys.
The washing of fine woollens, blankets, and bedding, and their care.

16. Cake for the family table.
How to meet emergencies of various kinds in the household.
The cost of living.

17. The beverages for the table.
A balanced ration for a farmer's family for two days.
The care of lamps.

18. The use of ice in the family living.
Disinfectants
Care of back yards and sheds.

19. The care of infants up to two years of age.
Little folks as mother's help.
How to clothe children.

20. Ten books everyone should read.
Appliances for home nursing.
Foods for the sick.

SUGGESTED TOPICS FOR STUDY.

General Food Subjects.

The chemistry of cooking.
Chemical composition of foods.
The nutritive value of foods.
The energy or force of foods.
The cost of various foods in proportion to their nutrients and their energy.
Animal and vegetable foods—comparative uses, value, and cost.
Economy in the use of foods.
Food requirements of the body in health and disease.

Water.

Its sources and supplies.
Its impurities and dangers.
Its uses in the body in health and in disease.

Ice.

Its sources and dangers.
Its usefulness in the family in health and in illness.

Frozen Foods.

Their composition and value.
Their use in health and in illness.
Making and serving ice-creams and ices.

Milk.

Use of milk and cream on the table.
The food value and the dangers of milk.
The dangers of milk as an exclusive diet for children.
Foods made from milk.
The milk supply.
Selection of cows for milk ; their food and water supply.
Care of the cow and her udder.
Cleaning and sterilizing dairy utensils.

Butter and Cheese.

The making, keeping, and marketing of butter.
The making, keeping, and coloring of cheese.
Cottage cheese.
Cheese as food ; its uses on the table ; its value as a food.

Eggs.

The value and uses of eggs.
Selection and care of hens for eggs.
Fowls as food ; cooking and carving

Meats.

Meats—their composition and cooking.
The food value of meats.
The selection of meats as to food values and keeping qualities.
The selection of meats in the markets ; best ways of cooking each cut.
Fish as food.

Vegetables.

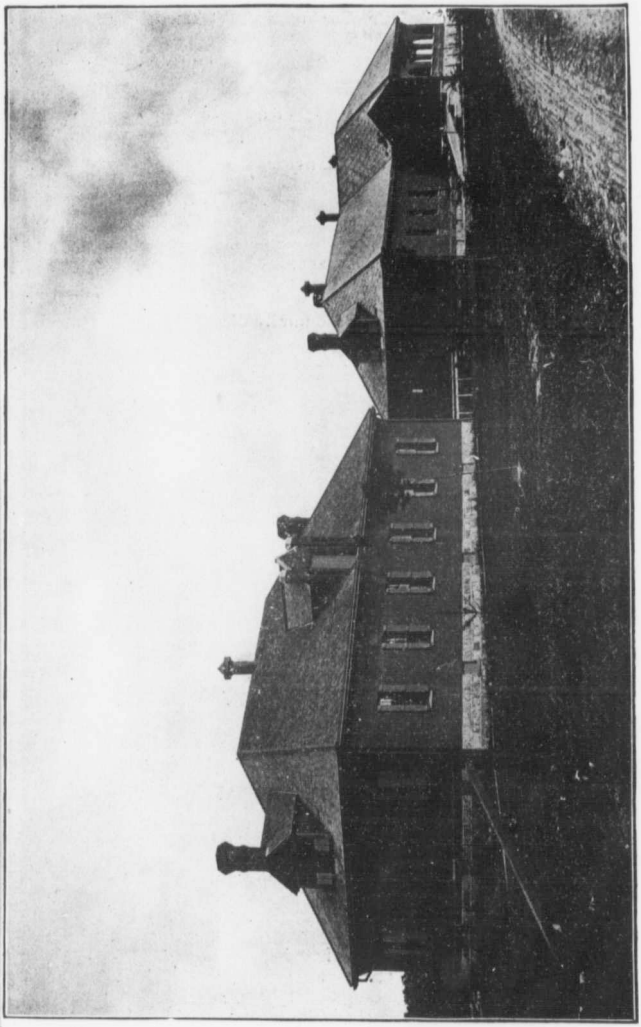
The summer vegetable garden on the farm.
Winter vegetables—their growth and methods of keeping.
The value of vegetables in the diet.
The kinds of vegetables and their food value—starchy, succulent, nitrogenous.
The preparation of vegetables for the table.

Fruits.

The value of fruits as food ; their use in our diet.
The small fruits of our country their growth and value.
Canning and preserving of fruits.
Desirable varieties of apples ; their keeping qualities.

Bread.

Wheat—varieties, as hard and soft, and the uses of each.
Flour - its production and use.
Yeast—history and growth and comparative value of different kinds.
Bread making.



An Ontario Cheese Factory.

Varieties of breads and bread stuffs.
Plain breads. Fancy breads.

CEREALS.

The value of cereals as breakfast foods.
How to cook cereals.

SALADS.

Green salads.
Meat and vegetable salads.
Nuts and fruits in salads.

DESSERTS.

Pies ; the value and danger of pies.
Puddings—varieties ; uses in the family diet ; value.

CAKE.

Cookies and doughnuts.
Ginger breads.
Layer cakes.
Loaf cakes.

DRINKS.

Tea and coffee.
Chocolate and cocoa.
Summer drinks.

SANITATION.

The disposal of house sewage.
Disposal of garbage and waste.
Care of sinks, sewers, and water closets.
Location and care of the earth closets.
Care of the cellar.
The contamination of wells by drainage from house and barn.
Sanitary condition of the stables.
Care of the sleeping room.
Sunshine as a disinfectant.
Physiological effects of light and heat.
Dust and microbes.
Disinfection.
How to vanquish dust.

HOME SURROUNDINGS

How to have a bit of good lawn.
Flowers and shrubs that are easy to grow.
The comforts of a little grove of trees.
Relation of the house to the barn.
Cleanliness of the surroundings of the home.
Care of the back yard and sheds.

Architecture of the Home.

Separation of the living rooms from the working rooms—kitchen and laundry.
Plan and arrangements of kitchen and pantry.
Requisites of a living room.
Requisites of a sick room; its convenience for isolation and for nursing.
Cellars—their uses and abuses.
The bath room, store rooms, and closets.
Heating and ventilation; values of different methods; cost of different methods.
Plumbing.

House Furnishing.

Color and its effects on interiors.
Carpets - their manufacture and selection.
Use for old carpets.
Curtains—manufacture of various kinds; selection for homes; effects upon health.
House plants.
Pictures and their uses.
The furnishings of a living room for comfort.
The furnishings of a guest chamber.
The daughter's private room.
The son's private room.
The kitchen—its furnishings and conveniences.

The Table.

The linen and its care. How, what, and when to buy.
The china and its care.
The cutlery and its care.
The care of glass and silver.
Table decorations.
Table service.
Simple meals, well cooked and nicely served—their refining influence.
Conversation at the table.
Influence of cheerfulness upon digestion.
How to banish care from the family table.

Home Management.

Domestic help - their treatment, training, duties, and rights.
Waste and economy of food materials, fuels, etc.
Labor-saving appliances.
A week's work for a busy housewife.
Daily and weekly programme of work.
The annual cleaning.
Insect pests of the kouse.
How to wash and iron.

Washing of fine woollens, blankets, and bedding, and their care during the summer.

Floors ; hardwood versus carpets.

The care of floors.

Sweeping and dusting.

The care of carpets, rugs and curtains.

The care of furniture.

The care of beds and bedding.

The care of clothing.

The cellar and the attic.

The care of lamps.

Our kitchen and costume.

How to plan our work so that it will not be necessary to keep on kitchen dress after dinner.

How to meet emergencies.

What to do when unexpected company comes

How and when to rest.

The Family.

The rights of parents.

The rights of children.

Duties of mothers.

Home duties of girls.

Home duties of boys.

Assignment of special duties to children as a means of teaching them responsibility.

Periodicals for the family.

Books that are best.

How to enjoy a visit.

Entertainment of the guest.

Duties of the guest to host and hostess.

Recreation in the home – games, etc.

The most profitable outings.

Home influence on the young.

How to create and preserve that atmosphere which gives character to the home.

The farmer of the twentieth century.

The farmer's wife of the twentieth century.

Finances.

The cost of living.

The household share of the income.

Living on an allowance.

Allowances for children.

How to save expenses.

Wastes through injudicious buying.

Wastes in the kitchen.

A dinner for four for one dollar.

A glimpse of an Ontario country road.

LITERATURE.

Government Publications.

The following pamphlets are published by the Department of Agriculture, Washington, D.C., and may be obtained free, on application to that Department:

Bulletin Number.	Subject.
No. 23	Foods; Nutritive Value and Cost.
No. 34	Meats; Composition and Cooking.
No. 29	Souring of Milk and other Changes in Milk Products.
No. 41	Fowls; Care and Feeding.
No. 43	Sewage Disposal on the Farm.
No. 57	Butter-making on the Farm.
No. 63	Care of Milk on the Farm.
No. 74	Milk as Food.
No. 85	Fish as Food.
No. 84	Vegetables and Their Food Value.
No. 93	Sugar as Food.
No. 94	The Vegetable Garden.
No. 112	Bread and Principles of Bread-making.
No. 126	Farm Buildings.
No. 128	Eggs.

The following are published by the Ontario Department of Agriculture, Toronto, and may be had on application :

Agriculture in Our Public Schools.....C. C. James.
The Women's Institute Reports.....G. C. Creelman.
Contagious or Infectious Diseases, and Hints on Methods for Dealing with Municipal and House Wastes ... Dr. P. H. Bryce.

The following bulletins may be obtained from the Superintendent of Documents, Washington, D.C., at prices affixed :

No. 21	The Chemistry and Economy of Foods, W. O. Atwater.	$0 15
No. 28	The Chemical Composition of American Food Materials, Atwater & Wood	5
No. 43	Losses in Boiling Vegetables and the Composition and Digestibility of American Food, Snyder, Fushy & Bryant	15
No. 45	A Digest of Metabolism ; Experiments ; Atwater & Langworthy	25
No. 56	History of Instruction in Cooking in the Public Schools of New York City, L. E. Hogan	10
	Household Insects	5
	True Clothes' Moths	5

Food and Cooking.

The Science of Nutrition, E. Atkinson, Danrell & Upham, Boston.	1 00	
Plain Words About Food, Ellen H. Richards; Home Science Pub. Co., Boston	1 00	
Food and Its Functions, J. A. Knight ; Scribner, New York	1 00	
Practical. Sanitary and Economic Cooking, Mary Hinman Abel ; American Pub. Health Association, Rochester	40	
Food Products of the World, Mary E. Green	1 50	
Food and Feeding, Sir Henry Thompson ; F. Warne & Co., New York	1 25	
The Century Cook Book, Mary E. Ronald ; Century Co., New York	2 00	
How to Feed Children, Louise Hogan ; Lippincott & Co., Philadelphia		
Chemistry of Cooking and Cleaning, Ellen H. Richards ; Estes & Lauriat, Boston	1 00	
Chemistry of Cooking, W. M. Williams ; Chatto, London	6d	
Boston Cooking School Cook Book, Fanny M. Farmer	1 50	
Bread and Bread Making, Mrs. S. T. Rorer	45	
Cost of Food, Ellen H. Richards	90	
Canning and Preserving, Mrs. S. T. Rorer	68	
Food Materials and their Adulterations, Ellen H. Richards	90	
Handbook of Invalid Cooking, Mary A. Boland	1 60	
Practical American Cooking, Juliet Corson	1 28	
Salads, Salads and Chafing Dish Dainties, Janet M. Hill	1 13	
Diet in Sickness and Health, Saunders	1 35	

Sanitation and Hygiene.

Home Sanitation, Mrs. E. H. Richards; Estes & Lauriat, Boston.	$0 25
The Cost of Living as modified by Sanitary Science, Mrs. E. H. Richards; John Wiley & Co., New York	1 00
Story of Bacteria, T. M. Pruden; Putnam & Co., New York	75
Dust and its Dangers, T. M. Pruden; Putnam & Co	75
Drinking Water and Ice Supplies, T. M. Pruden; Putnam & Co.	75
Handbook of Sanitary Information, R. S. Tracey; Appleton & Co., New York	50
How to Drain a House, G. E. Waring; Van Nostrand Co., New York	1 25
The House that Jill Built, E. C. Gardner; Adams, Springfield, Mass	1 00
Women Plumbers and Doctors, Mrs. Plunkett; Appleton & Co.	1 25
Air, Water and Food, Richards V. Woodman	1 70
Story of Germ Life, W. W. Conn, M.D	30
Primer of Hygiene, Reynolds	32

Children.

The Rights of Children, Kate Douglas Wiggin	1 00
A Study in Child Nature, Elizabeth Harrison; Kindergarten Pub. Co., Chicago	1 00
Concerning Children, Mrs. C. Stetson Gilman; Morang & Co., Toronto	1 50
Early Training of Children, Malleson	68
How to Teach Kitchen Garden, Emily Huntington	2 85

Miscellaneous.

Home Economics, Marie Parloa; Century Co., New York	1 25
Household Economics, Helen Campbell; Putnam Co., New York	1 50
Handbook of Domestic Science and Arts for Elementary Schools, Lucy L. Wilson; MacMillan & Co., New York	1 00
Nature Study for Elementary Schools, Wilson; MacMillan & Co.	1 00
Economic Function of Women, Devine	15
Domestic Service, Lucy Salmon	1 60
Hostess of To-day, Lina Hull Larned	1 13
Laundry Manual, Balderson and Limerick	45
Flowers and How to Grow them	35
Vegetable Gardening, Green	1 00
The Book of the Dairy, Fleischmann	

Magazines.

American Kitchen Garden, Boston, monthly	1 00
Good Housekeeping, Springfield, Mass., monthly	1 00
The Ladies' Magazine, Toronto, monthly	1 00
Kindergarten Magazine, Chicago, monthly	1 00

A well kept back yard with border of flowers

THE HOUSE.

"The largest sphere of nobility and usefulness for the majority of women is the home. To this work the homemaker should bring not only a magnificently trained mind, but a trained heart and hand, together with such technical knowledge of all that pertains to wise management as will make for health, culture, happiness and blessing wherever her hand touches."

The house has a three-fold office to perform: 1st, to provide for the family in its relation to society; 2nd, in relation to its own members, and lastly for the comfort of the individual. In planning the house it is wise to decide what are the interests of the family, and plan accordingly. Both private and community interests must be respected. In a modern house the hall or drawing room serve for reception rooms for strangers. The kitchen and dining room are the workshops of the home industries. The living room, whether called library or sitting-room, stands for the enrichment of family life, and the bedrooms for the privacy of the individual.

A well kept back yard with border of flowers

An Ontario Farm Home.

LOCATION. Choose good level ground, well drained; plenty of space in front of house; highest part of lot; consider view from various points. Kitchen, garden and chicken house should be convenient to the house. Plan (1 with a view to getting the greatest amount of sunshine in living rooms, as the sun is the great enemy to dirt and disease; (2) to economize steps, convenience of cupboards, stairs, etc.; (3) to secure ventilation.

EIGHT RULES FROM AN OLD ENGLISH BOOK, THE "GRAMMAR OF HOUSE PLANNING."

(1) Let the kitchen, the most impor ant apartment, always be on a level with the principal floor, and for strong light and ventilation it should have, if possible, windows on opposite or nearly opposite sides.

(2) The pantry or dish closet should be between the kitchen and dining room and easily accessible to both.

(3) There should be a set of easy stairs from the kitchen to the cellar and also an outer set into the cellar for admitting barrels, etc.

(4 More attention should be given to the arrangement and disposition of such rooms as are in constant use than those but occasionally occupied. Hence the kitchen and living room should receive more attention on the ground of convenience than the parlor.

(5) Every entrance except the kitchen should be through some entry or hall to prevent the abrupt entrance of cold air, and for proper seclusion.

(6) Let the entry or hall be near the centre of the house, so that ready and convenient access may be had from it to the different rooms and to prevent the common evil of passing through one room to enter another.

(7) Place the stairs so that the landing shall be as near the centre of the house as may be practicable, for the same reason.

(8) Let the partitions of the second floor stand over those of the lower as nearly as may be, to secure firmness and solidity.

CELLAR. Should be well drained, well ventilated with cross currents of air, windows opposite each other; as much light as possible; clean walls sweet with whitewash: ceiling lathed and plastered.

KITCHEN. Light; sunshine from at least one window; sink, cupboards and stove conveniently placed; utensils light in weight; an outside pantry for vegetables, to be kept dry and cool, as well as refrigerator for food that needs to be kept cool and damp. All woodwork should be oiled and without ledges to catch dust. Avoid cracks in floor or at junction of mopboard and floor. Glass cupboards with glass shelves for the storeroom is one of the coming improvements for the kitchen. If possible examine the kitchen on a Pullman car or ship for plans of economizing steps and placing of utensils. Have your fuel stored conveniently. In many houses coal is carried down stairs to store, then up stairs to burn; ashes are carried down and then carried up. Where possible have modern improvements used in your kitchen. The best kitchens now have a steam cooker, an Alladin oven, glass doors in oven of range

and a thermometer, sink mop, measuring cup, kitchen table with drawers for most used utensils and shelves for groceries. Have your laundry tubs and ironing table the proper height.

THE DINING ROOM. If the cellar and kitchen rank first in importance, the dining room where the family spend only a short time is the room where any sacrifice of sunshine can be afforded most easily. Study convenience to china closet and kitchen, but not direct connection with it.

THE LIVING ROOM. The old parlor or drawing room, reserved for visitors or special occasions, is rapidly going out of date, and with it the furniture and bric-a-brac which served only for show. The hair wreath, picture throws and tidies have no place in a living room. Cosy corners with lots of cushions with washable covers, good pictures and books, minister to the comfort and enjoyment of the family. An oriel window is desirable on the south-west corner, to gain all the sunshine possible and afford a quiet retreat. Every house should be planned to gain as much privacy as possible for its inmates, yet within an inviting common meeting room.

THE HALL AND STAIRS. With the tendency to use the hall as a reception room it has grown larger, and become an ante-chamber as large as the floor will permit. It is preceded by a vestibule, with floors and walls impervious to wet, and is separated from the front hall by glass doors. A cupboard in the vestibule, with hooks for coats and hats, does away with the necessity for a separate hat rack. The hall should be light.

THE BEDROOMS. These are for the individual; they stand for privacy There should be plenty of cupboards, cross currents of air, and should be removed from bathroom and plumbing. As so much soiled clothing goes into the cupboards they should be ventilated; if a window is impossible, have a transom.

BATHROOM. Should be separate from all the living rooms, and so planned as to be directly above any other plumbing in the house. Porcelain bath tub is best, with open plumbing and all pipes exposed. Avoid placing pipes near outer wall on account of winter frosts.

THE WOODWORK. In planning a house it is desirable to avoid square corners, as they are hard to keep clean from dust. The corners in all hospitals and sanitary buildings are round. The base-board, wainscottings, door frames, window frames, mantel and stair railings should be selected with a view to future cleanliness. Mouldings that afford little harbor for dust and germs lessen the housekeeper's work in caring for them. Windows should not be too large, and should be hung on pulleys so they can be easily raised and lowered, and, if fitted with a board three inches wide at the bottom, an opening is provided at the middle of the sash, where a current of air will ensure adequate ventilation in winter.

EXTERIOR EFFECT. After the plans have been arranged with regard to health and comfort the exterior effect of the house must be considered. Beauty and utility are not incompatible. The first law of good architecture is proportion. A house is in good form in so far as all its

parts are harmonious and in right relation to each other and to the whole. There must be no ornamentation for mere ostentation, no striving after effect. All adornment must be second to the useful service which the part adorned is to fulfil. Truth, simplicity, harmony, adaptability, and usefulness must be the five tests by which we judge any building. Much study and thought must be given to the subject of Domestic Architecture before our cities and country are redeemed from the many showy, fanciful, inartistic houses.

BOOKS OF REFERENCE.

"Jack and Jill." By E. C. Gardiner.
"Domestic Science for Elementary Schools." By L. Wilson.
"Home Sanitation" (Chap. II. . Mrs. E. H. Richards.

TOPICS FOR PAPERS.

Have several members prepare plans for a house, and discuss them in relation to convenience, ventilation, etc.

The tendency of building furniture into the house due to the use of hard wood.

The advantage of the country home in securing privacy for its members and opportunity for the development of individuality.

True relations of beauty and use.

THE CARE OF THE HOUSE.

The care of the house means simply an endless warfare with dirt, visible and invisible. It entails ceaseless effort to prevent the accumulation of dirt. In this warfare an understanding of the enemy is essential.

GERMS. It is only within the last decade that we have had any popular knowledge of germs, the friends and foes of man. Germs—minute living organisms so small that it takes from six to twelve millions to make an inch—are so omni-present and so active that they are recognized as playing a very important part in the daily life of man. The bacteria of the soil, of the dairy and of yeast have become familiar terms. The housewife has to consider the bacteria of dust.

BACTERIA. The wind and rain grind the rocks into dust which powders the earth, bits of dead matter are given off by animal and vegetable organisms, minute fibres from clothing, the dry and pulverized excrement of animals, and these constituents are the dead, inert matter of dirt. But besides these there are living organisms which we call bacteria, and the danger to health comes from these. Bacteria are simple, one-celled plants, the smallest of living things—so small that they could not be detected by the microscope until methods of cultivating them were devised. Beef tea specially prepared and stiffened with gelatine or agar sugar serves as food for them. Bacteria planted in this grow and form colonies large enough to be seen and studied. A small particle of dust introduced into this medium may produce thousands of these colonies. The bacteria multiply

by division. Each individual stretches out and divides itself into two similar halves, each of which repeats the process. So rapid is this multiplication that it has been calculated that in one day each bacteria would produce over 16,500,000 descendants, and in two days about 281,500,000,000 were their forces not checked. But despite the forces working against the rapid multiplication of bacteria, given a dark, moist, warm atmosphere they multiply themselves with great rapidity. Most bacteria are harmless and many are useful. The housekeeper must wage her warfare against the bacteria which carry disease. Small pox, diphtheria, typhoid fever, and particularly consumption, all result from germs from some person who has been ill with the disease. The germ may have entered through food on which it was resting, by water, or air as it touched the exposed flesh where the skin was broken by a scratch or cut. It finds in the blood or flesh the moisture and warmth necessary for its growth. Nature has provided the body with protection against disease. Undoubtedly we all inhale many bacteria in the dust of badly ventilated rooms, clouds of dust from the streets, etc., but our bodies have been in a condition to resist them. It is the part of the wise housekeeper to reduce the number of attacks, by preventing dust and dirt to find a harbor in her home. One of the first precautions is cleanliness of food. She must interest herself in obtaining clean food, clean milk, and proper sanitary precautions in the slaughter and sale of meats.

Cleanliness as the Preventive of Disease. Prevention is better than cure. When cleanliness comes to be regarded as the preventive of disease we shall finish and furnish our houses with as few dust traps as possible; rounded corners to our walls, simpler mouldings and base boards, absence of unmeaning and useless ornamentation in our furniture. Rugs which can be thoroughly shaken will take the place of carpets. All unnecessary draperies will vanish, and the curtains that remain will be washable. Nor will these concessions to sanitation make our homes bare. Most of the efforts at ornamentation are simply an attempt to cover up the lack of harmony and proportion in designing and furnishing of our homes. Our houses are more like bazaars than resting places. In every nook and corner are crowded extra furnishings that have no meaning for us. With simplicity our homes would grow in individuality and artistic qualities. Simplicity and bareness are not synonymous.

Cleaning The daily care of the house, with the thorough ventilation of each room, the use of the carpet sweeper and the damp (not wet) duster in gathering up dust and not simply scattering it, the care of painted floors and the benefit of hardwood floors, and how to keep them clean, and the annual cleaning are all practical topics and each one deserves special consideration. It would be impossible to give minute directions for each of these, so the reader is referred to "The Chemistry of Cooking and Cleaning," by Mrs. E. H. Richards.

Laundry Work. This is one of the most serious problems. Some farmers' wives are solving it by having a co-operative laundry attached to the cheese and butter factories, operated by the same power. This sounds feasible, but while waiting for these co-operative laundries the

housewife should simplify her washing. The main points in laundry cleansing seem to be: "The removal of all stains; soft water and a good quality of soap. The use of strong alkali in solution only; not too much nor too hot water while the soap is acting upon the dirt; thorough rinsing that all alkali may be removed; long exposure to the sunlight - the great bleacher and disinfectant."

THE SINK. The care of the pipes and traps in a house necessitate a coarse sieve in the sink to prevent the refuse clogging the pipes, and the daily washing of the pipes with a hot solution of washing soda or potash.

REFUSE. The disposal of garbage is another important consideration in the care of the house. All organic matter such as animal or vegetable refuse should be kept separate from dry matter, ashes, paper, boxes, etc. On the farm, with plenty of uses for all refuse, this is not such a live problem as in the city, and yet one never goes into a farm shed without wondering at the accumulation of articles which have served their day and could well be counted as refuse.

BOOKS OF REFERENCE.

Dust and Its Dangers—Pruden.
Story of Bacteria - Pruden.
A Handbook of Sanitary Information - R. T. Tracey.
Women Plumbers and Doctors—Mrs. Plunkett.
Home Sanitation—Mrs. E. H. Richards.

STUDY TOPICS.

Is the care necessary for exquisite cleanliness conducive to the happiest homes?

Why is the health of the farmer's wife not equal to that of the farmer?

Bacteria and their relation to disease.

How does the body protect itself against the living ingredients of dust?

What methods would you suggest to lessen the risk of acquiring bacterial diseases in public and private places?

THE FURNISHING OF THE HOUSE.

"One of our deepest needs—one might even say the deepest need, as a people—is full cultivation of the sense of beauty. There is no child so poor that he has not the inheritance of beauty as his right."—HELEN CAMPBELL.

The function of Art in the home is to give pleasure to the common things of life, by giving them beauty of form, of pattern, and of color. The first law of good taste is fitness; and no amount of beauty in the material or excellence in the workmanship can compensate for a lack of this quality in an object of decoration. Lasting pleasure can be found only in thoroughly useful and well constructed things, made out of good material, appearing in their appropriate places and fulfilling their proper uses.

Color Studies. The woman who would furnish her house artistically must make a study of color and of lines. Dark colors absorb the light and make a room look smaller, light surfaces reflect it. Yellow is the best color for a north or dark room, and in yellow there is a vast range of shades, from the delicate cream to the light golden brown. The neutral or soft tints of any color are preferable to the more decided. A color should be suggestive rather than pronounced. The soft shades of blue in gray blue and peacock blues make a good background for pictures and furniture in a room with lots of sunshine. There are soft shades of sage and olive green so restful to the eye that they seem the wise color for the walls of the living room.

Carpets and Wall Paper. In carpets and rugs the soft colors which blend with the walls have taken the place of the vivid greens and bright reds of the past. The patterns, too, have ceased to be so large and obtrusive. The rugs in which the neutral shades of quiet and harmonious colors blend and give the effect of one shade blending into another are better than those in which the pattern stands out glaring and distinct in glowing colors. The carpet should be darker than the walls. In selecting either carpets or paper, one must bear in mind that mass intensifies a color. A sample of wall paper will never look as dark as when seen on the wall in mass.

Long Lines give Size to a Room. In paper, every break in the line of the wall tends to make the ceiling appear lower. A lady told me about calling at a house where there was a deep red dado around the base of the wall and continued up the stairs. The walls were low. "The minute the maid opened the door I felt as if a girl in red were fleeing from me up the stairs, and then the walls seemed so low, I felt like putting up my hand to prevent the ceiling falling on me." A most inhospitable reception for a hall to offer. If you want to give your rooms an air of spaciousness, aim for long lines. You can procure these by having no large, obtrusive patterns in wall paper or carpet, no violent contrast between the border of your paper and the body. The color of your paper should grow lighter as it reaches the ceiling and if the ceiling is colored or papered it should be lighter than the body of the room.

Painted walls are the most wholesome because they can be washed. When we come to have a higher regard for cleanliness we shall eschew unwashable paper. A wall painted in some of the neutral shades of green, blue, or golden brown, gives a good background for pictures. A border of paper blending with the walls, where a stencil pattern drawn around the top is not feasible, gives the desired finish.

The vestibule, the entrance to the house, should be weather proof, tiles or linoleum on the floor, the walls hard plaster, tiles or hardwood in the lower part and hard plaster above tinted in some shade of blue, pearly grey or pale green.

The Hall. In the conventional long hall of the average house, it is difficult to do more than give the floor and walls proper attention, and add a chair for any one who may wait there. In the modern house the hall has become the living room, and chairs comfortable and easy,

tables with magazines and books, the fire place around which the family gathers as it comes to and from the dining room, find a place there. Aim to secure a good back ground in the color scheme of the walls and floor, one with which the color schemes of the rooms opening off the hall will harmonize.

THE LIVING ROOM OR LIBRARY. The furniture of the living room should enable the members of the family to follow their chosen pursuits and pleasures. Its primary purpose is rest and enjoyment. A sofa long and wide enough for comfortable reclining upon it, a table for books, a secretary with writing materials, chairs suitable for work or rest. Rattan, wooden, and leather chairs are all practical in the living room. Study comfort, convenience, durability and brightness in furnishing.

Books and pictures are the best ornaments. We are learning to appreciate quality more than quantity, so choose good pictures rather than many. Avoid sad pictures. Each picture suggests a thought. Let the thoughts be full of cheer, stimulation, beauty or restfulness. Good pictures need not be costly ; although good workmanship adds to the value of any production. Photographs of the world's masterpieces may be obtained at a very low cost. Flowers add their notes of beauty, and a good piece of bric-a-brac, chosen for its own beauty, rather than to fill a corner, a piece of good statuary, and pretty china are pleasing accessories. Growing plants are the best furniture for the family room.

THE KITCHEN. The floor should be of hard wood, oiled, with all cracks filled with plaster. If an old floor use linoleum, but avoid a carpet. The walls should be painted or covered with a washable paper. The sink should be of soapstone or else of iron, porcelain lined. If a wooden sink must be used, line it with zinc. The pipes must be in full view, never enclosed. Tables covered with oilcloth save labor, but care must be taken to have asbestos mats or plain boards to set hot pans and pots on. The range is the most important piece or furniture and should be the best possible.

DINING ROOMS. The colors in a dining room should be light and gay, and a rug that can be shaken is preferable to a carpet. The furniture should be substantial; the table broad with square corners. Shelves with glass doors for pretty china are a desirable addition to the dining room, but this room must be furnished with the thought of perfect cleanliness.

THE BEDROOM. The ideal bedroom would contain simply the bed, with ample means for heating, lighting and ventilating, and all the conveniences for the toilet in an auxiliary room. One third of our lives or more we spend in our bedrooms, so we must use every precaution to keep them clean and the air wholesome. We are always ridding ourselves of the waste products of the body through the skin, lungs, and kidneys. The friction of our clothes rubs off the waste particles from the skin so all under clothing should be thoroughly aired daily and frequently washed. The air we breathe having performed its function of cleansing in our bodies returns to the air of the room laden with carbon dioxide. The kidneys discharge

their waste product in the urine ; it continues to decompose and changes into carbon dioxide and ammonia, thus adding to the impurities of the air. With care, these three causes of uncleanliness may be removed from our bedrooms.

There should be no woolen draperies and if possible a hard wood floor. If the floor is of soft wood it should be painted. Rugs, which may be easily shaken, are admissible, but here as elsewhere, the knowledge of bacteria lurking in dust and dirt has sounded the knell of carpets.

When two persons occupy the same room, separate beds are desirable. Brass and iron beds are preferable because of the ease with which they are kept clean, and their openness to air ; washstand and dressing table with covers that are easily laundried, and pin trays, hair receivers, etc., of china or metal. Some chairs and a table complete the necessaries, while a screen and a rack on which to hang clothing or bedding to air may be added to the list of desirables.

BOOKS OF REFERENCE.

Household economics.—Helen Campbell.
Domestic Science in Elementary Schools.—L. L. W. Wilson.
The Canadian Horticulturist.—A Monthly Magazine.

STUDY TOPICS.

HALL AND RECEPTION ROOM. How to express hospitality without sacrificing privacy ?
THE DINING ROOM. Influence of surroundings on digestion.
THE NURSERY. What it can do for the character of the child
What Plants are most desirable for house culture.
The use or abuse of ornaments.

WOMEN'S SHARE IN THE FAMILY INCOME.

"The secret of thrift is knowledge ; knowledge of domestic Economy saves money ; knowledge of sanitary laws saves health."—KINGSLEY.

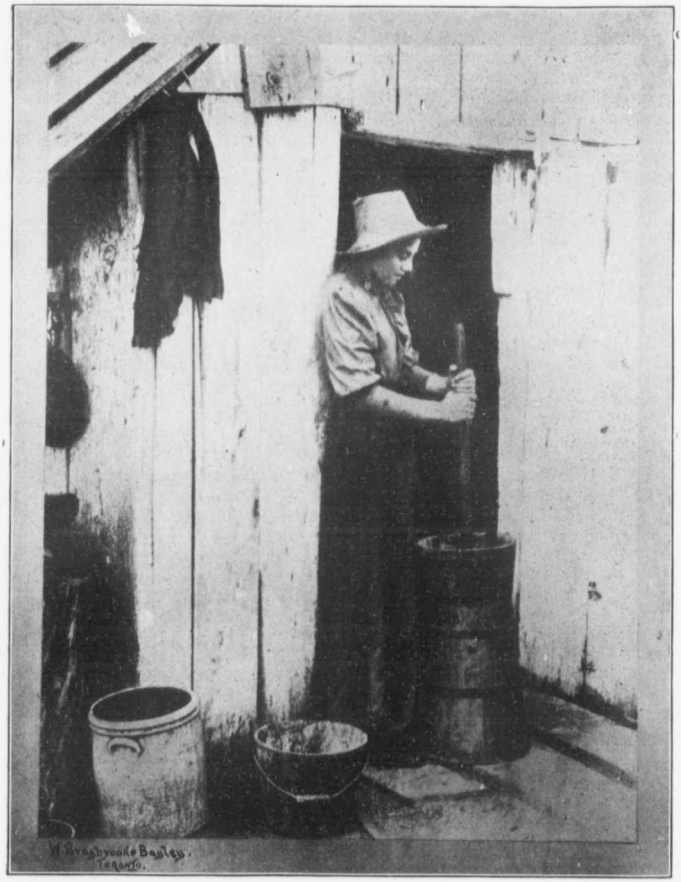
WOMEN'S FUNCTION IN THE HOME. "The economic function of woman is to spend the income so as to secure the greatest possible degree of health, happiness and general well-being, and to develop the highest nobility of character in every member of the family."

(1) COMPANION. It is necessary that there be similarity of aim between husband and wife, so that they can work together for the general well-being of the family.

(2) MOTHER. There is a necessity for an educated motherhood, that due importance may be placed on the physical, intellectual and spiritul development of the children.

(3) CONSUMER OR BUYER. Women must know the quality of the material they buy, and must also know the bad effect that the purchase of poor materials has on the production of goods.

(4) PRODUCER. Either herself or as director, she carries on the following home industries,—cooking, baking, sewing, dressmaking, tailor-



THE OLD DASH CHURN.

ing, acts as nurse, governess, gardener, dairymaid and poultry keeper. The question here suggests itself, "Is it possible for her to do so many things well, and if not which of them is of sufficient importance to demand special training?" Strength, time, ability, are the factors in augmenting

Never too early to mend.

the family income. The woman who is dishwashing, cooking, etc., is valuable as a servant; she who superintends and systematizes the work is valuable as a housekeeper; she who adds intelligence and knowledge, and seeks to have the spiritual grow up through the commonplaces of life, is the home maker. She contributes to the sources of income as she secures the greatest freedom for each member of the family to grow in health, morals, and spiritual power. The fundation of the family is the income plus the intelligence of the heads of the family.

DIVISION OF INCOME. There should be a just proportion between income and expenditure.

The sources of income on the farm: house, meat, milk, butter, vegetables, flowers; money from sale of products, interest on investments.

Expenditure of income: For existence, savings of capital, culture and philanthropy. On the farm a small proportion is necessary for physical life; a large proportion for the intellectual and emotional life.

Mrs. E. H. Richards, in dealing with city incomes from $1,000 to $3,000 a year proportions them thus:

Physical Life 75 per cent.

Rent, including taxes, insurance, repairs, 15 to 25 per cent.
Running expenses, (Fuel, light, ice, wages) 10 to 20 per cent.
Clothing 10 to 20 per cent.
Food 25 per cent.
Incidentals: Gifts, flowers, fee to specialists (largely fines for disobedience to natural laws) physician, nurse, dentist.

Intellectual and Emotional Life, 25 per cent.

Religion (Church and charity), 5 to 10 per cent.
Education—Schooling for children, books, magazines, papers, lectures, pictures, recreation, amusements, athletics, travel, 1 to 5 per cent.
Investments, savings, insurance, 10 to 15%.

HOUSEHOLD ACCOUNTS. The habit of keeping household accounts is calculated to strengthen the judgment in making a wise use of money; therefore an analysis and study of expenditure serves to bring clearly before the mind the relative importance of the different things money will procure.

Make a list of the various expenditures for the home: groceries, meat, clothing, books, church, philanthropy, service, fuel, savings, etc.

Rule your account book with a column for each class of expenditure, and have a page for each month. Add the amounts so the various expenditures may be compared with the previous month and the corresponding month of previous years. Start the year with a schedule of the amount necessary for the different needs, and compare your actual expenditure with the schedule.

BOOKS OF REFERENCE.

"Economic Function of Women."—Ed. Devine.
"Cost of Living as Modified by Sanitary Science."—Mrs. E. H. Richards.

TOPICS FOR PAPERS.

Allowances for children: Should they earn them or should they be given? (See *American Kitchen Garden*, May, 1901.)
Is it wiser for a farmer to sell at the market or at the stores?
Should husband and wife have allowances for personal expenses?
Should the women on the farm try to carry on industries to add to the income? What should such industries be?

Distinguish between comfort and luxury.

What responsibility should a woman feel, to have a clear knowledge of household management, as her share in the marriage partnership?

Difference between economy, parsimony and frugality.

How far is philanthropy optional and how far a necessity of our higher life?

An early start.

THE CARE OF CHILDREN.

"The glory of living is to transmit a higher life."

PREPARATION FOR PARENTHOOD. Some one has said that every child ought to have the privilege of choosing his own grandparents. Year by year the conviction that every child has the right to be well born

is growing. To be well born implies healthy parents; a marriage in which there is love and community of interest, high ideals of purity by both father and mother.

"How can young fathers and mothers be brought to look upon parenthood as a science, an art, a profession, a vocation a sacred office, as something at least beyond an accident or a social custom, so that they will carefully prepare themselves for it?"

CARE OF THE NEW-BORN CHILD. Upon the regular habits of sleeping, nursing, etc., formed the first few weeks of the baby's life, depend the "morals of his body." For the sake of the mother as well as the child the baby should be fed regularly. Regularity is, next to cleanliness, the greatest protection to the health of the child. Begin on the day of its birth. Do not hold the child in your arms to put it to sleep, but lay it on its pillow, seeing to it that the room is warm enough and the body protected from draughts. Arrange a regular time-table for feeding, and keep to it. Usually the intervals between nursing should be two hours in the day time and three or four at night. Babies are not all cast in the same mould. Some require a shorter and others a longer interval, but once decided it should be regular. The baby ought to take a sufficient amount of food at a time to fill its stomach, and then to wait long enough for that organ to become empty. This permits time for digestion and for subsequent resting times for the child, and repose for the mother to produce the best milk in sufficient quantity.

THE NURSERY. The nursery should be the sunniest room in the house. Do not be afraid of plenty of fresh air, even in cold weather. When it is too severe for the baby to go out, dress him and place him in his cradle, well covered and shielded from draughts, open the window and let the sun stream in upon him. Keep your nursery cool; 68° F. is warm enough, even for bathing an infant, and 66° F. warm enough for children old enough to romp and play.

THE BATH. The baby's bath should be given daily in a room first well aired and then warmed. Give him plenty of opportunity to exercise with his arms and legs, but be careful that he does not get chilled. A flannel bath apron for the mother and a large soft towel in which to wrap him when he is taken out of the water, is advisable. Take great care of his mouth. Fresh absorbent cotton and pure fresh water should be used daily, to wipe the gums and tongue.

THE CHILD'S DRESS. Next to being well-born the baby has the right to be well-dressed. No baby is well dressed whose garments impede muscular activity, which is the first instinct of the healthy child. Have simple garments which provide the maximum of protection with the minimum of discomfort, and in no way interfere with the vital actions of the child. All parts of the body must be equally clothed, and all garments must hang from the shoulders, These are the two fundamentals to be kept in view in baby's clothing. In the Gertrude Suit, which was the united device of an intelligent mother and physician-father, there is no band compressing the abdomen and chest. The navel is dressed only with a pad of absorbent cotton,

and a light band held by two pins, just sufficient to retain the dressing, and to be used just so long as the dressing requires to be supplied. Next the skin is worn a canton flannel or Jaegar wool garment, cut princess shape, about twenty-five inches long, with sleeves to the wrist. All the seams must be smooth and hems at neck and wrist should be turned to the outside. The garment is fastened by a tie and one button behind. The next garment of flannel is made the same, but sleeveless, and the armholes bound or scolloped. The ordinary princess baby dress completes the suit. The three garments are put together sleeve within sleeve, and slipped over the baby's head at once, buttoned behind, and the baby is dressed, there being but one pin—the diaper pin—in the whole costume. The diapers should be canton flannel, in two sizes, 18 by 18 inches and 10 by 10 inches ; the larger to be folded diagonally to an even edged triangle, and the smaller folded and inserted where most needed, thus saving unnecessary heat over the kidneys.

Watching for the boat.

Common sense should be the guide in all children's clothing. Aim to secure freedom of limbs, sufficient warmth, but not too much. Avoid over dressing as well as under dressing.

Training the Mental Side. Bound up with the physical life of the child is the mental. "Nor soul helps flesh more than flesh helps soul." One of the most important habits for the child to form is concentration of mind upon whatever he is doing. The

infant at play can be aided by his mother's interest and suggestions to concentrate his suggestions for a longer time on his toy. The tendency for a child to seek some new toy and dissipate his energy and ability to think by craving constantly new amusements, can be overcome by the wise mother. Every parent should read carefully some kindergarten books. Froebel recognized that in the child was the seed of the man, and whether the child developed all the possibilities of his nature depended upon whether the parents were wise gardeners, understanding the conditions of growth. "Come let us with our children live" is the key note of his system, and side by side may be placed the other motto "We learn through doing." The child, through his spontaneous work and play, not only furnishes the key to his natural tastes and abilities, which should be carefully guarded and guided, but he learns through such actions. It is the task of the mother to guide the child by sympathy and suggestions, to develop his individual ability and not try to impress upon him and make him a mere imitator of her ideas.

The individuality of the child developed through creative activity, the guiding into observation and judgment, leading to concentration and self-control, the realization of the child of his relation to society and to nature,—these are a few of the fundamental principles which every parent should strive to know and adapt to the home training.

The Child Should Work. The child should have regular, systematic work, and be made to feel from early years that he is part of the home life and contributes his share to the family comfort. It will depend upon the parents whether that work is a drudgery or a delight to him, and moreover, upon the spirit he puts into his early work will depend the failure or success of his later life. Work and activity are essential to us. Leisure is simply the opportunity for the work that we like. The wise parent will seek to teach the child to love work, either by making the task interesting or by infusing a motive into the labor.

Moral Training. The child's moral training depends upon the example of his parents. What effects would you expect from such mistakes as the following: paying children to be good, making and breaking promises, impetuously talking gossip and scandal before children, sending untruthful messages by them to neighbors, threatening them with policemen and other ogres, administering severe correction for small faults and no correction for graver faults according to the mood of the parent, criticizing servants and teachers in the presence of children?

To train children requires a sympathetic and intelligent knowledge of child nature, and it means abiding reverence for the great trust committed to you. There are many parents like those in Browning's "Pompilia":—

> "Two poor, ignoble hearts that did their best,
> Part God's way, part the other way than God's,
> To somehow make a shift and scramble through
> The world's mud, careless though it splashed and sported,
> Provided they might so hold high, keep clean
> Their child's soul, one soul white enough for three.

REFERENCE BOOKS.

The Feeding of Children, Louise Hogan.
The Rights of Children, Kate Douglas Wiggin.
A Study in Child Nature, Elizabeth Harrison.
Concerning Children, Mrs. C. P. Gilman.

SUGGESTED TOPICS FOR DISCUSSION.

Artificial feeding for children.
What place should meat have in children's diet?
Should the child be taught that he cannot fully share the diet of an adult?
Should the State educate children to be good citizens or to earn a living?
Why should every child be taught to care for and love plants and animals?
How far are children's lies the fault of parents' untruthfulness.
Punishments and their adaptation to wrong doing.
The benefit of play for children.

Grandmother helps.

THE HOME AND HOUSE KEEPING OF TO-DAY.

By Ellen H. Richards, in *The Delineator*.

The House We Keep.

The house in which a family lives is a sort of outer garment which expresses the standing in the community, the taste, the ideas of the persons living under its roof. Even more expressive of the character of its inhabitants is the interior of the house, its order or disorder, its cleanliness or uncleanliness, its simplicity or its crowded tawdriness. A room always retains something of its customary occupant which is noticeable to a stranger who enters it for the first time. Indeed, it is possible to paint with great vividness the chief characteristics of a family by a single but scrutinizing survey of the house it occupies. Perhaps an unacknowledged feeling of this truth is at the bottom of the decay of hospitality that welcome of the guest to the family circle which is not "entertaining" but is friendly and hearty greeting Are we a little ashamed of our life in the house? Are we afraid that our arrangements may betray us to the outside world? Too many of us are living more or less for an outside impression, so have a larger house than we can furnish or care for properly, or somewhere there is a skeleton which we wish to hide; but in order to hide, we are missing one of the sweetest pleasures in life the quite hour with a friend in the heart of the family.

All animals provide a place of safety for their young, of shelter from the weather and of protection from their enemies. The house should be man's place of safety and shelter—especially so for the children, the old and the ill—his place of refuge, comfort and liberty, though not license, where all cares and worries may be shut out. Hence it must express quiet, restful effects. But instead of fulfilling these conditions, the house is often a death trap, and a man finds his home so uncomfortable that he is glad to escape from it to his club. Many a woman discovers, when too late, that the house she thought so perfect has insurmountable drawbacks. Our modern housewife escapes these troubles by first deciding upon the kind of life she and her family are to live in the house and then building or renting one in which it will be possible to carry out that life. If the tastes of the chief members of the family are quite and literary, then a room suitable to evenings at home with books and work is essential; if gay company is desired, then a room suitable for the comfortable seating of a dozen is to be provided for.

The house, unless it is in the country, is too often sacrified to the supposed needs of civic life. Mrs. A's house is thus and Mrs. C's is so, and I do not wish to have mine, which stands between them, otherwise. A certain compromise we often admit, but even then the question of sunplan (a house not quite with the points of the compass often works out best in this respect) upon which side of the lot to build to get the best; how far back to set the house, and above all, how high to have the basement in order to make all connections with the city drains; the direction of the prevailing winds, all these things should be considered. Nearness to lines of transportation, the saving of time for the children and those who go to town; expense of locality, whether where fashion or comfort

rules ; relation to direct paths of contagion, should epidemics occur, although not often taken into account, should also be considered. Would the children, in going to and from school, be obliged to cross streets which are the thoroughfares of the careless and ignorant? Of course, none of us would build out houses beyond the limits of city water and sewer service, unless quite in the country.

The first impression on entering a house is not to be dispised. The hall should express welcome and wholesome invitation to rest and cheer—our idea of a home. Does this come when we step into a close, stuffy atmosphere, where the odors of the last meal mingle with those of the next one, such as we frequently meet when we open the door? How we want to turn and rush out into even rain or fog !

The best advice I can give one who is seeking a boarding place is not to go where the greeting at the door makes you aware that you have entered a shut-up ill-managed, closet-like house. Danger is ahead, for the plumbing is apt to be bad and the food poorly cooked. A boarding-house may not have an open fire in the hall, but its hall should lead up into the open air. For our house which we shall build, the chimney will be so placed that in one corner of the hall there may be an open fire two-thirds or three-fourths of the year for ventilation and mental cheer (a most excellent place, too, to burn up various bits of refuse). I fear I class my acquaintences according to their valuation of fire. In such a hall the air will not be noticeably different in quality from that out of doors, only pleasant as to temperature, warmer in Winter and cooler in Spring and Autumn. Then, do not ask your friends to go up to the second story out of your sight the instant they enter. That is not hospitality. How many houses have the long flight of stairs the most evident thing !

The living-room and dining-room must share the southern exposure, even if the entrance and the hall are on the side or placed different from the neighbors'. It is the architect's business to make the exterior presentable over our shell, but not our business to be satisfied with what we can get out of his exterior. Bay windows and corner turrets aid in catching sunlight—that source of cheer, that universal microbe killer and all living-rooms should have the sunshine ; a fire will have to do for the other rooms used only in the evening or only occasionally, if one must have such. Too many people live in discomfort all the year round for the sake of offering an occasional guest the "best there is in the house."

The educated woman of the 20th century will plan her kitchen before she settles upon her parlor. From the kitchen comes the life of the household, literally, and in that there must be good cheer and convenience. This is really most material, for a bad-tempered cook may sour the food, and a dark kitchen will most certainly breed more kinds of bacteria than are wholesome. What, then, should we look for in a kitchen? First, light enough to see dirt—light over the sink, light near the stove, light flooding every corner, sunlight, too, from one window at least ; windows or ventilators so placed at the top as to let out bad air, steam, odors, etc. The odors of burned food, boiled cabbage, etc., are far less noticeable if there is plenty of fresh air to oxidize them. Then,

if the kitchen is large, a sink in the middle of the room so that more than one person can conveniently get at it, but not of the enclosed variety, mind you – the horrible dirt trap! At the expense of a few more steps have a cold pantry on the outside for fruit, vegetables and many such things that are better kept cool and dry than cold and damp, as in the ice-box or refrigerator. Kitchens are often too large, requiring too many steps. This is due to a mistaken idea that unless large they will be hot and stuffy. Not so, with proper air flues and proper methods of cooking. As evidence, look at a ship's galley; everything at hand, and all immaculately clean. The paths of work should not too often cross or interfere. In a factory the raw material never goes back upon its path from the time it enters until it leaves the building. The kitchen should be made as sanitary as the hospital or the dairy. Townsend Hall, the dairy room of the Agricultural College of the University of Ohio, has smooth walls, aluminum paint, bright shelves of glass. Supplies are kept in glass jars, which show the worms in the meal, or in tin cans which may be scalded – no wood to soak up liquids, to become mouldy and smell— all smooth and clean, or, if wood, enamel painted.

The passion for woodwork which led builders of fifty years ago to box up the kitchen sink induced them to make drawers in the kitchen and pantry closets. These set in their thin frames under the stairs, in closets, anywhere, are responsible for much of the misery caused by water-bugs and bacteria.

The hospital ship "The Bay State" had wire netting for enclosing all stores to be locked up; slat shelves for large things made of glass or galvanized iron or zinc, not of brass unless aluminum painted.

Debility and digestive disturbances often come from dirty kitchen cupboards and pantries. That is, I believe, one reason why with all our improvements, we are not as well as our grandmothers. Dirt in our working departments is responsible for the bad flavor and unappetizing food of so many cooks.

Glass or smooth shelves may be shielded from dust by doors, if they are in a dusty place, but they should be removable so that a thorough cleaning may be given them. A butler's pantry should have a sink with hot and cold water for delicate glass, thus saving steps and china. Here it will pay to have hot water fixtures; the mistress will then enjoy keeping her wedding presents in immaculate order. If there is but one servant, or if the little mistress has the wisdom of the time and lives in simple elegance, doing much of her own work herself and thereby adding to the grace and refinement of life, then steps from kitchen to dining-room should be few, and the butler's pantry must be at one side, not between those two rooms.

In planning and furnishing every part of the house there must be a clear idea of the aim of the life inside. To one who has had no experience I would say: Before really settling go into a small furnished house or an appartment for six months do your own work with the aid of as much help as you like from out-side —but let no servant sleep in the house – and then you will find out what you want in the house, and especially what you do not want.

One thing we must insist upon in our 20th Century house ; that is, a shaft in which there shall be a lift, even if it is so simple that we cannot call it an elevator, so that trunks may be taken to the various floors without using the stairs, a prevention of dented walls and torn paper, as well as expressmen's imprecations. In case of lameness or illness an easy-chair set on this lift makes the transit from floor to floor easy. It is an evidence of how little thought we have put upon the real work of the house that we have not insisted upon this. If women would only go about with their eyes open and select from the office, the store, the laboratory, those things which would make lite easier ! An elevator would make it possible to have the kitchen on the top floor, with all the servants' quarters, but I am not so sure of the wisdom of this as to recommend it. Hitherto the fire risk has been too definitely great, but fireproof construction is becoming more and more possible and should be encouraged.

The rooms should be large and few, rather than small and many. The small rooms of modern apartment houses are stifling, especially when crowded with furniture and ornaments.

Let us now go up stairs in our 20th Century house. We prefer to sleep farther away from the ground than our forefathers did. Malarial air rarely climbs to the second story except in very diluted form—perhaps one should say, mosquitoes do not fly high.

The second floor will contain the sleeping-rooms, dressing-rooms and a sewing-room, nursery, or whatever it may be called, one sunny, airy room cut off from all plumbing and, if possible, isolated from the rest of the house as to air and noise. There will be also a nook somewhere with a writing desk where the mistress may retire for her silent hour to keep her accounts, write her notes and lay her plans. This nook should not be too large, but should have a pleasant outlook, for the mistress of a model family often needs the cheering influence of nature.

Then the sleeping-rooms ! What has happened to our American women that they have made parlors and museums of their chambers ? I fear college life has helped in this matter. In our model house we will have no sleeping-room that has not windows on two sides at least, even if one is a high transom-like opening, but opening out-of-doors. We will have a place for the bed out of the draft, but sufficiently in the current air. It is usually safer in cold weather, when the room is small, to leave the door open, screened if need be, so that the hall may act as a ventilating shaft, for the sleeping-room should always have a circulation of air.

As to the drainage and plumbing it may be frankly confessed at the outset that these present some of the most intricate problems with which the house-builder has to deal, but it may be said that they are like most knotted skeins—after the first few knots are carefully disentangled the rest of the difficulties vanish almost of themselves. However, there is a special inducement to extra effort in this direction, for from defects in this department dangers to life and health in the household arise. In many cases these may be averted, without expense and without technical skill, by intelligent oversight and a knowledge of what defects to

look for, how to find them and how to remedy them. When an expert is really needed, a little knowledge enables one to recognize the fact in season to save the heavy penalty of illness or expensive repairs which delay often involves. In no department of household economy are the old adages about the ounce of prevention and the stitch in time more valuable. Three canons of house drainage may be given: — 1. All refuse matter must be completely and rapidly removed. 2. No passage of air should be allowed to take place from drain or waste-pipes into the house. 3. No communication should be permitted to occur between the drains and the water-supply.

Porch Decoration, (Crimson Ramble Rose).

The Servants we do not keep.

Deny it as vigorously as we may, the house is the only place in which "servants" are found in America to-day. Factories have operatives; shops and railways have employees; merchants have clerks; bookkeepers, treasurers, secretaries have assistants; street cleaners are workmen. Only the housewife has a "servant." What wonder that she finds it difficult to keep this relic of a past age.

It is not entirely that the work of the house is held less worthy than that of the field and factory; it is that, as it is now done, it is done under command without thought on the part of the doer. It is not even as an intelligent machine that the house is run, but in a groove, in deadly monotony. The interesting things have all been taken out, and the daily routine is chiefly the repairing of daily waste, the getting rid of refuse and of the street dirt brought in by many feet. When the week's work is done what is there to show for it? How can there be pride in the doing of that which never remains done?

For the average servant the disadvantage lies not in the work, but in the loneliness, the isolation from all human interests. Those of mistress and maid conflict, not coincide.

Northern house keeping, in regard to service, seems to have gained its bent in the custom of taking a neighbor's daughter into the family as a sort of apprentice. We read in stories of English life of the pride with which Tom, the farmer tenant, tells of Jean being in the next township with a mistress famous for her good dairy or her good cooking. The feeling that the lass was growing up skilled in those things which would make her in turn an excellent mistress, often comes into the English story.

In early days, before the emigration to Ohio was ended, the same held true in New England. In my own town there was not a single servant. A neighbor's daughter came in, to help when there was need. There was a common aim in all the days work, an acceptance of the conditions; and in the prevalent theological and political discussions was found a relief from the mere manual toil. The Knownothing Party and the Calvinistic creed, whatever we may think of them in themselves, certainly served as mental stimuli to the New England woman as well as to the man. Subjects of thought outside the daily round were never wanting, and the pinching economy which was often necessary gave impetus to invention; hard as were the conditions, happiness was not wanting, and the neighbor's boy and girl thought themselves fortunate to sit in the chimney corner and listen to these discussions of fateful import. George McDonald's stories of Scottish life bring out these traits with great force. It was this community of interest which made the early life so wholesome.

With the existence of slavery in the South and with the immigration of foreigners in the North a different element came in, and while in a measure the maternal care which was considered due to the neighbor's daughter continued from force of custom, there could be no longer community of interest. A separate class came about—one which never expected to become *one* with the employer; which took a temporary occupation with little interest in it, or on the other hand, a class which bitterly feels the great gulf fixed by difference in religion and race. One girl wrote in answer to Miss Salmon's schedule—"Ladies wonder how their girls can complain of loneliness in a houseful of people, but oh, it is the worst kind of loneliness!" Their share is but the work of the house; they do not share in the pleasures and delights of a home. One must remember that there is a difference between a house, a place of shelter, and a home a place where all your affections are centred

The domestic employee is not only restricted as to her hours and her visitors, but she can rarely offer hospitality to a caller, even a cup of tea. She cannot ask a friend to dinner or to share a dainty; she feels imprisoned and defrauded, as anyone would under like circumstances. This is a point in which young housekeepers may safely make a change. I think it is largely responsible for the measure of success which has come to me in my housekeeping and that I have always allowed a measure of hospitality in the kitchen, and I do not think the exchequer has particularly suffered.

The separate church relations cause as wide a difference as social considerations, and yet instead of accepting purely business relations we are insisting on feudal conditions. All this is so contrary to the general trend of American spirit, to the abolishment of the apprentice system only to introduce skilled work, that it is certain to be superceded by more just ideas and by better ideals of home life.

The ethics of the home includes not only the attitude toward and treatment of those in our employ, but an acknowledgement of the value of their service to us and a recognition of their worthlessness when they are worthless. Is not the greater part of the present condition of things caused by the fact that good wages are paid for poor service? That there are no recognized standards of good work?

The new maid is taken into kitchen and parlor and shown in a vague and general way certain things which she must and others which she must not do, by a mistress who cannot remember how much money she spent yesterday, and is then left to become as mixed in her mind as is her mistress; she is reproved if in three days' time she does not anticipate the wishes of the family as only one who had lived with them for years and understood their unspoken wishes could; she is also held responsible for the consequences of sudden changes of plans, which are often made without sufficient notice.

Instead of the neighbor's daughter or the girl trained in a local school or brought up in a large household, we find our source of supply from cases like the following: Bright Kitty Cordigan, rejoicing in house, husband and three rollicking children, sends home for three younger cousins to seek their fortunes in this land of plenty. James is to try for work as a day carpenter, Kate is to be a cook, and Norah, the gay and careless child, is to be second girl. None of the three has much knowledge of steady work, but all are more than fortunate in Kitty's protection. The first day of her registeration at the office Kate is engaged as cook for a family of three. Surely that will be easy, at $4.00 a week. The first morning she finds the fire a difficulty. Used only to peat or soft coal, the nack of burning "rocks" is not to be learned in one morning. After a struggle the breakfast is prepared at the time designated. It is a full half-hour after, however, before the master of the house is down. In ill-humor with himself and with the now cold and soggy breakfast, he angrily orders a chop to be broiled at once. Poor Kate anxious to please, finds the black rocks of half an hour since at a heat intense beyond any previous experience. The chop is burned, the oatmeal kettle has gone dry, the solder melted. Bursting into tears, she hears the door bang, and receives the message. "You will not do; we want someone who can cook." Wearily she packs up and goes again to the office. The next kitchen is fitted with a gas range - an utter mystery to her - but the second mistress is a shade more considerate and shows her how to use it. The two children of the family, however, are coming at all hours for stolen sweets and refusing to eat at the tables. The mother blames the cook for their indigestion, but when she refuses to supply them between meals they make her life so unhappy that at the end of a fortnight she tries the office again to find a mistress who delights in little surprise parties

and luncheons, and who expects Delmonico cooking from this month-old Americanized Irish girl. Finally wise Kitty secures a place for Kate as cook's assistant at $3.00 a week in a large house, and she begins where she should have begun at the first. Unfortunately the number of such assistants is small compared with the needs of the general situation.

Innocent Norah on the second day was taken by Mrs. B. as second girl. Mrs. B. had so many club meetings to attend that she gave Norah only general directions as to giving the drawing room a thorough sweeping and dusting and then, lest there be idle moments, left a dress to be renovated around the bottom. Norah, beginning to sweep with her accostomed vigor, struck against a slender pedestal and down came a small plaster bust with a crash. How should she know that things were ever placed so insecurely? Soon the room was thick with flying dust. She had never been told that ornaments should be taken down and covered, rugs taken out—there were so many things! Her fingers caught in the ribbons and over went a costly vase of flowers, deluging some books.

Norah thankfully departed to take service with another woman whose house was less of a museum but more of a prison, since she felt personally responsible for every hour of her girl's time. The week after she took the place Kitty asked Norah to her house on Tuesday evening; some of her husband's friends were coming for a political conference, and there would be supper, James would be there—he always had his evenings to do as he liked; some of the girls in the shops, who also had their evenings, were coming to help. Now, Thursday was the second girl's evening out, and her request to change it to Tuesday was met by blank refusal. Homesick Norah showed her disappointment so keenly that cook took it upon herself to smuggle her away for an hour or two; told the mistress she had gone to bed with a headache, and sat up to let her in. Good natured Kitty had her next festivity on Thursday night, but the rules of the house were that the maids were to be in by half past nine, so that they could be in their rooms before ten. Kitty's house was half an hour away by car, and as her guests were all working people, it was half-past eight before they came and after nine before supper. For a week poor Norah had seen no one with whom she could talk but the cook and tradespeople; she is having a good time and stays for one more dish; it is already half-past nine when she tears herself away from the only just beginning pleasures; the car is delayed, and at half past ten she finds a stern mistress awaiting her, who dismisses her on the spot, grudgingly giving her shelter of her roof for another night.

Extreme cases, readers say. Not at all; only too common types. The girls find that their brother has no such difficulties. Various clubs and reading-rooms are open to him and at the end of six months he has already begun to understand local politics and can talk on labor questions with a score of people. The only way his sisters can make any advance is by frequent changes, with a few days between each engagement, when they enjoy the luxury of time to do as they like, with a chance to see busy streets alive with color and motion and sunshine. The love of community pleasures, of gay throngs, is deep in the hearts of all these nationalities from which we are drawing our supplies, and many a mistress buys

the devotion of her maids by theatre tickets, by special holiday trips, by gratifying whatever is dearest to the special maid's heart. This is effective, but so far immoral as it constitutes the maid a willing slave for the rest of the time instead of educating her to greater self-respect.

But many mistresses take infinite pains with green immigrants; teach carefully and slowly and kindly. Alas, these dear woman are usually the very ones who, looking upon the girl as a child, attempt to graft their own social and moral points of view upon a character already formed upon an inheritance of race prejudices generations strong.

Factory and shop labor present few of these difficulties. Women are there treated as machines and not as proselytes. Freedom of thought and of opinion is not interfered with.

The problem of house labor is almost entirely ethical—that is, the personal liberty after work hours more than makes up for the greater confinement during working hours. As Miss Salmon says, "No application of the Golden Rule can eliminate the competition of other industries." What domestics, as a class desire is an opportunity to live their own lives in their own way—not that they desire the friends, the amusements of their employers, but their own friends, their own amusements. Even what would be in themselves the greatest advantages often cease to be such when the element of personal choice is removed.

It is perhaps quite needless to reiterate here the dictum that reforms begin at the top, but the housewife everywhere is demanding schools for servants before she asks for knowledge and training for herself. The old copybook maxim "knowledge is power" applies to the management of a household as well as to a factory or machine shop and it is probably true that our servants are making more strenuous efforts to gain power than we ourselves.

The employer needs to have this point of view presented in order that she may accustom herself to look upon the routine of housekeeping as a business, requiring the use of well-recognized business principles and demanding of her a certain business training to enable her to manage successfully the modern establishment. But she needs even more to consider the ethical ideal for herself; the meaning of the family life and the home in the social scheme and to learn wherein it demands self-sacrifice and painstaking study on her part

The Butcher and the Baker.

To secure bread and meat, one pound for each per person per day, is the end for which the busy wheels of industry revolve, for which wharves and warehouses are built; for which railroads and steamboats race across land and sea. Without this supply there would be no use for the rich textiles for house and dress—no people to inhabit the houses if built, for life itself is conditioned on the food supply. The lowest animal or plant life thrives in direct proportion to the abundance of its food. That the human animal does not always secure the highest development in the presence of the greatest abundance gives food for thought.

The animal or plant has a limited range of motion and only few kinds of food. It has strong instincts preserving it from mistakes. Man has a wide range and a supreme contempt for the restrictions of lower forms of life. By his enterprise and ingenuity he has brought together in his markets the produce of every zone, fruits of the tropics, grains of the north, fish from the sea, birds of the air. Of these he eats regardless of season, of harmony, of flavor, of cost. Because of this insatiate greed he has built refrigerator cars and cold-storage warehouses, so that he may enjoy at any season the products of any other, and therefore he never fully enjoys anything. When will the human race learn that there are complimentary foods as well as complimentary colors? When will it secure that harmonious variety on its table which is enjoyed in the shades and tints produced by the judicious blending of colors? Not before that time will the pleasures of the table be truly refined. At present the food offered is very crude in form and flavor and is chiefly obtained from the butcher and the baker. The butcher is advisedly put first, for butcher's meat is the pivot around which all meals revolve. Meat three times a day is the ideal attainment of the foreign immigrant, who in his own home was fortunate to get meat once a week. To such an extent is this desire for meat indulged that a laborer in Chicago not infrequently uses two pounds per day, and in State institutions and charity hospitals it is not uncommon to find the amount running up to one and one-half pound per day per inmate. In well-to-do families a portion of this butcher's meat is replaced by fowl, fish, game and more delicate foods, but in all grades the chief characteristic of American diet is its excess of animal food. What relation this fact has to the craving for other stimulants, to the nervous breakdowns so common, to the excitable manners, to the ability and energy undoubtedly shown by American people, cannot be discussed here – the present purpose is the practical one of showing how to provide for this demand at a cost which will not eat up all the allowance in our hands.

Where bread is truly the staff of life, a family of five can easily provide its food for $2.50 to $3.50 per week, so that the father's wages of $8 or $10 a week suffice for the comfort of all; but when the meat-eating habit has been fixed the weekly bills for that alone may come to $7, at the lowest estimate, with a strong tendency to go higher whenever a small surplus is at hand. In the use of larger incomes the meat bills are the despair of the family provider. How shall they be cut down and the health of the family yet maintained is the cry of many a burdened housewife. In attempting to answer this I am well aware that, at many points, I shall cruelly hurt many pet prejudices; shall controvert the teaching of many family physicians; shall outline much work and study for the woman who plans the food; but readers may console themselves with the undisputed fact that everyone who writes on the subject of food has very decided theories, and the present writer is no exception. The aim of this paper is to offer suggestions as to one way, suggestions which should stimulate other women to find out other ways of accomplishing the same results by other means.

In the first place, we can assume that meat is a luxury, not a necessity for human life. The necessary constituents of food are found in abundance in eggs, cheese, vegetables, cereals, nuts, etc.

Butcher's meat has been made costly by the amount of care, time, and food that has gone to the growth of the animal, its transportation and preparation. This price is increased by the great waste of unsalable material which, nevertheless, has been built up at the same expense as that which we use—the brain, blood, heart, etc. Also, the hide, bones, etc., which are not sold for food, take away from the weight which comes into the kitchen. Again, its perishable nature makes the dealer charge enough to cover loss. The wise housewife will, therefore, order her meat with care, making each pound yield its full value for her purpose which must be to satisfy her family with the flavor which they crave. She will not give them a poor quality of roast, but will give them the best less often and use meat in some other form which by experience, and by that alone, she has found to pass without criticism. How often the sigh of despair comes to my ears when these other forms are mentioned. "My family absolutely refuses to eat stews." The trouble is the American housewife has not learned the art of combination, the skill in flavoring which makes a well-made stew one of the most delicious of dishes instead of the greasy, watery concoction which usually goes by that name.

Another line of "meat extenders" is foreign to most American menus—the various escallops and "loaf" preparations for luncheons and suppers. Here again flavor and aesthetic appearance will save money, and, a point not to be overlooked, the meat so warmed up is much less harmed by this second heating than if it were warmed by itself, since the heat is conveyed to it by means of the moist bread crumbs, not by hot fat. So far as possible, meat should be used as soon as cooked. I have no sympathy with the family that cannot take the same kind of meat two meals in succession. The circumstances of modern life render it usual to have all the remnants of food kept in one refrigerator—that bane or blessing, according as it is used wisely or foolishly. This is rarely at a temperature lower than would check the changes so ready to take place in food, especially if the food has been allowed to stand in the dining-room or kitchen awaiting the tardy members of the family or the cook's pleasure. For every minute it is exposed and for each square inch of surface, from a hundred to a thousand germs settle upon it and often get a fine start before chilling in the ice-box begins. Close covering is, of course, not advantageous, but shelter from the falling shower of dust is most essential.

For variety, and to avoid too much dark meat, advantage should be taken of the market to secure poultry (unfrozen) and all kinds of fish.

However much one may wish for a vegetable diet, it is difficult to secure it successfully without much knowledge and skill, and when it is attempted there is need of a sustaining principle behind. It is entirely possible by the use of nuts with cereals and vegetables, to secure the right proportions, and by skill in cooking and the judicious use of vegetables to produce agreeable flavors; but if the average housewife cannot

attain to this, she can at least cut down the meat supply to three and one-half pounds per week per person.

I am often asked if children should eat meat. If, as so many physicians tell us, meat is a nerve stimulant, it is the last thing American children should have in their school days. We hear much of over-pressure at school, but little or nothing of overfeeding or underfeeding at home. If the child is a healthy animal, it will hardly be possible to force him to overwork—he will go to sleep over his lessons, not sit up to study them.

But all this time the baker has been standing patiently waiting our pleasure, and now he offers his wares. Fine white bread, beautiful to look at but with little taste, because the portions of the wheat which give flavor have been removed and with them the mineral phosphates. Such bread is excellent for adults who have abundant diet and so get sufficient flavor and salts, but for children or for a meagre diet it is better to look further on the baker's shelves and select a darker loaf of richer flour, which can be relished by itself or with the addition of butter only, although the use of butter has been one means of bringing about a flavorless bread. The common people of Europe who eat sour breads use little or no butter, while the higher classes who use sweet but rather flavorless breads, use a great deal of butter. On the other hand, the use of butter has contributed to the wholesomeness of our breads, since it tends to drive out sour breads, which are considered by men of science, both chemists and physicians, to be, on the whole, far less wholesome than sweet breads.

We will suppose that our baker knows not only what an ideal white bread is, but how to make some twenty varieties of rolls, small loaves and scones, using not only wheat flour but barley, oats, rye, corn and many combinations of these. Surely from all these it will be easy to select a varied and acceptable diet for our children and for those who do not need, or should not have such stimulating food as beefsteak and roast mutton ; in fact, to supply them with vegetable meat instead of animal meat, in attractive forms. We have been very remiss in regard to the matter of bread in this land of plenty, showing very little ingenuity, although so far as variety of *badness* in home-made bread goes nothing is left to be desired. It is not difficult to find every degree of sourness, heaviness and under-doneness. Shall we continue this battle with poor yeast, uneven temperature, uncertain ovens, or shall we let our baker make for us all the kinds of bread we like ?

The chief difficulty seems to be that we have not in America at present a standard by which to judge good bread. Each housewife considers her own loaf the ideal one, and her family is brought up to hold all other kinds as inferior. But patient work and sensible co-operation among women will in time bring about better economic conditions.

Just as soon as there is uniformity of demand there will be uniformity of product. One little sermon must be preached, and that not to dull ears. Bread right out of the oven is never fit for human food, unless it is all crust. If we cease to demand fresh, hot bread, the way will be smoother. Rolls properly cooked and properly warmed over are

much nicer than the fresh, sticky product of the maid's early rising. Muffins, corn-bread, graham gems may be used for breakfast or tea twice a week to advantage.

As to breakfast cereals opinions differ. Some hold that the soft, pasty mass is unsuitable for the first work of the newly awakened stomach, others that their simplicity and freedom from fat are favorable for the light nourishment which the morning hours demand. It is not a bad plan to serve properly toasted bread with cereals, and much of the evil effect may be obviated by never even suggesting the use of sugar with milk or cream. It is best to use such preparations as have flavor in themselves.

Our baker still waits to show us other wares—crackers in infinite variety – the delight of the child's heart and boon to the light house keeper. They do not grow sour or mouldy ; many of them are flavored, and their crispness adds pleasure to the eating. Is there any hygienic reason why we should not avail ourselves of the baker's ingenuity? Is there danger of forming the cracker habit? Only the watchful physician can tell us whether to moderate our likings in this direction.

Of sweets the baker has piles galore, and we are tempted to shake our heads at him for this. Sugar is good, but there may be too much of a good thing. It must be remembered that sugar contains neither nitrogen nor phosphates, neither iron nor sulphur, and is a comparatively simple chemical compound The most "nutritious" substances have, on the other hand, a very complex composition, and this fact probably plays a part in the animal economy. There is danger in analogies, but we may venture this one. Kerosene burns with a hot flame, but it leaves no bed of coals which may be covered up with ashes to keep a perpetual fire on the hearth. It has been suggested that the use of sugar by the present generations, especially by those who have an otherwise abundant diet, adds to the very present danger of too concentrated food, and when added to starch, as in cakes, and to the white of egg, as in many confections, leads to serious digestive troubles.

The wise baker takes great pains to secure a first-class pastry cook, whatever grade his bread maker may hold. Well-made pie is most toothsome ; it never lacks flavor, and it has high food value for the money. It also has "staying" qualities, due to the slow digestion of its component parts. To balance these weighty facts we can only oppose the one statement - not always proven - that pie is not as wholesome as other forms of human provender. There are pies and pies, some with light, flaky crust, well baked and crisp underneath ; some with a quarter of an inch of soggy paste on the bottom and greasy, thick covering, with filling of a highly spiced something it is not always easy to tell what. In any case pie requires outdoor exercise as its complement rather than the air of the schoolroom or the lecture hall.

It is the belief of many observers of the signs of the times that the baker is destined to play a more important part in our practical housekeeping in the future, and therefore it behooves us to begin educating him or her. Even the smallest village might support a home bakery, if

it were under proper supervision. No business offers better rewards to women than this, and as the importance of the butcher lessens that of the baker will increase.

Housekeeping as a Profession—The Training for it.

A regret is often expressed when a highly educated woman marries. It is commonly implied that her previous training was unnecessary—that the time and money expended on it were wasted. It is true that at times one hears a similar plaint when a professional man of several years' training enters business, but the cases are more rare.

A PORCH DECORATION.

There thus comes to the surface the common opinion that housekeeping is the natural element in which women float like ducks on water; that no effort on their part is required, and only a slight observation of their mother's habits. This implies a general impression that as little change has occurred in the life of human families as in that of duck families; that housekeeping means pretty much the same thing from century to century.

A little close attention to present conditions will reveal the fact that in the twentieth century a broader education is required to *spend* money

wisely than to *earn* money by practice of a trade or by the use of capital in ordinary business. It might even be a question if education was not more essential to the one who must select food, fabrics and art objects so as to secure the highest welfare of a family than to the "captain of industry" who is controlling the manufacture of one particular class of goods.

The Spender of Money, the User of Wealth, are the new titles of the housewife of the twentieth century. To use money to the best advantage, a knowledge of the values—both comparative and ethical—of the things to be obtained with money is absolutely essential. By ethical values is meant the relation in which the given objects stand to the mental or moral development of the individuals brought in contact with them.

How shall a woman know how to choose a rug, or a picture, if she has had no training in color, in decorative design, in æsthetic values? She takes the word of the salesman, himself ignorant, or the paid agent of the dealer. *She* does not really spend the money—she pays it over—but the salesman chooses for her, to her shame, since she is the guardian of the house treasure-chest.

How shall a woman buy food in the market which will be at once economical and healthful if she has not studied the composition of food materials and their relative values? Here, again, she is at the mercy of custom, of flattery and of temptation to gratify eye or palate at the expense of highest efficiency. It may well occur to some reader to ask if the college woman knows any more than anyone else of these very practical things. Perhaps not, but she has at least learned how to learn, and that in time. She has found out that she does not know everything by intuition.

Even more than in the purchase of material there is need for a knowledge of values in the employment of labor. The great advance in American manufactures has come about through a shifted adjustment of machinery and human labor, through an adaptation of means to ends. Steps are economized; muscular effort is made to accomplish tenfold its unaided work.

Is this possibly due in part to the separation of interests between the husband - the wage earner—and the wife - the money spender? How often the wife is ignorant of the amount of the income which is rightfully hers to spend; how often the husband is bored by the details of daily expenditure when the wife does try to discuss them! How rarely do we find true partnership in the disbursements entailed by the maintainance of a home!

The house has had little part in this advance, because the average housewife looks upon her domain as sacred from the intrusion of modern science, of machinery, of economical production.

In housework, almost alone of all occupations, tradition outweighs science; custom bars out progress. This cannot go on through the century. Money will not be so plenty, perhaps; the producers of money will awaken from their pursuit to ask what becomes of it; what good it brings. Ill-health and discontent will rouse thoughtful persons to ques-

tion the prevailing habits of the people, and possibly a Congressional Commission will investigate the use of money in the homes of the land. Somewhere, somehow, the question is sure to arise. How shall it be met?

Wealth is only relative. It is because it will procure that which its possessors value that money is desired. The intention is to surround one's-self as far as possible with whatever ministers to welfare and happiness. Is this the condition of the homes of the land of to-day? Are they prosperous, well-managed, happy? Is there not on the contrary great discontent, growing unhappiness?

One remedy for this state of things seems to some persons to be the education of the present and prospective housewife along the broadest social and economic lines, to give her an opportunity to learn how to use money so that it will bring adequate results.

In order that she may do this she must put herself in the attitude of a learner and not of an expert; she must be willing to spend time and thought in acquiring the A. B. C. of the profession - for it is more than a mere trade. Once acquired the time demanded of her will be less than is now exacted by the haphazard methods, and life will acquire a new and fuller significance.

In any average audience of women to-day the percentage of those who are willing to even take the necessary pains to master one department is discouragingly small. The majority wish to have the solution of the whole problem put on a card which they can carry in their pocket-books. The application of a general principle to the individual case seems to be beyond the limit of the mental training of many women. Perhaps it might be said that the studious habit is lacking. Certainly the scientific habit of thought is woefully lacking.

Life in the main is covered by four kinds of mental and physical work: (1) To know why and how; (2 To do; (3) To direct others to do; (4) To judge the efficiency of the result.

Housekeeping is a supervising position (3 and 4, even if it is also 1 and 2), and includes the results of many trades, shorn as it is of nearly all its old-time manufacturing processes.

One great difference between the day laborer or the clerk and the professional man is that the first does day by day what he is told; the second plans his future and makes each day's work tend toward that end. He is himself the directing power, the restraining power, but in all things the *power*, not the *machine* alone.

The housewife as a professional person must have power, plans, aims—strongly held and consistently carried out; otherwise she is only a day laborer, a clerk, or worse yet, that drain on society, a social debtor.

No matter how she gains it, she must have the knowledge and skill necessary to rule her own household. Her reproach is that she attempts to do that for which she has not prepared herself, and then denies that she is unprepared; claims that circumstances, conditions, persons are at fault, never herself.

If one has had the patience to follow the thought expressed in this series of articles, she must be prepared to listen to the logical conclusion. Housekeeping in the twentieth century is a serious business, and no one can expect to succeed who has not had an experience in her own home, in school, or by bitter pain and struggle educated herself.

It is because we speak to unwilling ears and unbelieving hearts that our words have so little effect. Prophets of evil we are called, and as such we are unwelcome. Appeals come from every city in the land for help in organizing schools for what? Learning this profession, this business of spending money so as to secure efficient, healthy, happy human beings? No, indeed, but schools for servants who shall be trained so as to save the mistresses the little oversight they feel now compelled to take. This one fact betrays the general attitude of mind, the feeling of self-complacency enjoyed by the average woman. Her servants need training, but she does not. Even the heaven-born artist or poet needs to acquire technique, but the woman by virtue of her sex knows "how to keep house."

If she will acknowledge that her ideal is life in an apartment which her husband hires for her, which is heated, lighted, cleaned and renovated under the guidance of the janitor, and the expense included in the rent her husband pays; if, further, the meals of the family are taken in the restaurant and the washing sent out, leaving only the purchase of clothing, candy and flowers, and the dusting of bric-à-brac and arranging of said candy and flowers on the five o'clock tea-table, to be included under housekeeping—then, perhaps, she is right. This seems, however, to be housekeeping by proxy, and that proxy a man or several.

The men are learning the profession so well that I have serious thought of establishing some few years hence a school of housekeeping to which only young men who have had a scientific education shall be admitted. Judging from present tendencies, I fancy that by the time they had finished the course every one of them would be able to secure positions at fine salaries. I know of no profession in which there are so few applicants, at least so few who have any idea of what the profession means, as that of scientific housekeeping. Men have a better start in the race, for they have the foundation of scientific knowledge which as yet women lack. Will they always lack it, one is tempted to ask?

The training of the up-to-date housewife must rest upon a working knowledge of chemistry, physics, physiology and other fundamental sciences now taught in every good high school and manual-training school, and, as I believe, soon to be adapted to the lower grades in the essentials relating to daily life. It must include a fair knowledge of social and political economics and of ethical and economical standards, of values of goods, of labor and of time in relation to human efficiency. Somehow this knowledge must be gained whether in college, in special schools, in clubs and classes, or by private reading.

True professional training does not end with *knowledge;* it includes practical application and theoretical investigation. Therefore, some-

where there must be opportunity for experiment; there must be a means of making known the results of experiments.

Every house in the land offers a field for this application. Everyone could contribute a mite toward the desired sum, and soon the result would become evident

How much is being done to improve home conditions? And where can we find an account of it?

The household economic association, State and national, the various magazines, and especially the Western agricultural colleges, are doing much to help the people to a just appreciation of the problem.

Several Institutes, like Pratt and Drexel in the East, Bradley and Lewis in the Middle West, are fitting teachers as well as training pupils of high school grade; a few colleges and universities are providing in one or more directions something toward the better study of the economics of consumption. The Home Education Department of the New York State Library, at Albany, furnishes lists and travelling libraries on home economics and publishes a syllabus for study. The Lake Placid Conference is devoted to considerations of practical means of advancing the cause of better home administration, and, not least in value, the United States Government is constantly issuing bulletins of great use to the intelligent housewife. Any or all of these helps are as food to the one who will study them, but like food they must be digested and assimilated, and not applied on the outside like a plaster.

Many years ago I saw a phrase in such a relation that it has held its place in my mind in spite of all overcrowding:

"Do the thing that lies next."

The thing that lies next for us housewives is to improve some corner of our homes, to gain a better control of our own machinery, and then to share our knowledge with some one else.

Mental laziness must be shaken off and a resolute attack made upon the unfavorable conditions in which we find ourselves.

Women are reported to be "practical," but we are face to face with new surroundings and new facilities, and a grasp of "theoretical" possibilities is needed; therefore, I repeat that trained minds are needed to lead in this new path. One of the best results of the incursion of women into business pursuits will be to accustom the sex to look upon the daily routine of housekeeping as a business to be learned like any other, and it is certain to dawn upon them soon that not every women is adapted to win success in the profession; that, as in everything else, division of labor secures a better product.

To "keep" the house is not to wash or iron or cook or sweep, but it is so to plan and arrange each detail, whether it be carried out by the same or another pair of hands, that the whole will be successful in its object—the comfort and well-being of the family.

Co-operative Housekeeping.

The idea of co-operation implies two propositions: persons of the same mind wishing things of the same kind. A co-operative bank de-

pends upon a sufficient number of persons with money who wish to deposit it. Paupers, misers or spendthrifts do not belong to this organization. So a co-operative store can exist only when a thousand or ten thousand buyers wish the same things. Who would go to a co-operative store for Chippendale chairs, Morris papers, or strawberries in January? A number, and in general a large number, of persons is needed to sustain the somewhat cumbersome bulk of any co-operative concern, and while there is, of course, a certain variety, it must be in the nature of the case a limited variety.

Those who advocate co-operative housekeeping often forget the infinite diversity of American habits, tastes and incomes. Even in an industrial or trade centre where there are thousands of operatives or clerks doing the same work and receiving the same wages, the homes of the majority of those earning more than a living wage will be found to differentiate into infinite variety: one family spends all its surplus on clothes, another on food, another on pleasures

It is the very freedom which we boast that our air is carrying into everyone's lungs and with which everyone's brain is being intoxicated, that favors the diversity of appetite which is the bane of every boarding-housekeeper's life and every shopkeeper's balance sheet.

Co-operation necessitates an understanding of this vagary or that fancied dislike. If one has stock in a co operative store, one feels obliged to take the quality of goods found on its shelves, even if they are not exactly what would have been chosen from another shop.

A co-operative boarding-house means the setting of a table which suits the greater number, and the dainty or whimsical must put up with it or withdraw Thus the tendency of co-operation is always to reduce to a level. To be sure, it is always possible to raise that level, but it must be by the education of the tastes and opinions of those of the lower half so that they will be willing and anxious to see it done. This again involves a sacrifice on the part of those above the line of their own special habits for the sake of the general good. How far this interferes with the law of social evolution it is hard to say. It would seem that the more plastic a society, the more freedom to move among its units, the easier new ideas take root and the quicker reforms come. At least, it has been the American experience that the greatest advances have been made outside any co-operative schemes. Such combinations may well be conservers of a given condition; they cannot be pioneers in a new one.

Furthermore, it seems proper to ask:

1. — Do we wish to conserve present conditions or to develop new and more satisfactory ones?

2. — Are we, as individuals willing to make the sacrifice for the sake of the community?

We may repeat the fundamental idea in another form, for while there are several ways of securing co-operation in whatever may be in question, the essential principle at the bottom of all successful results is that all effort shall be made in straight lines and not in diagonals. Four horses pulling one load must pull in the same direction and not at all angles if the load is to move to the best advantage. It is necessary that

the four horses either think alike of dinner at the end or obey equally the guiding rein, or that one of the four shall be the leader whom the others imitate The same is true in anything in which a number of persons participate. There is the common end to gain, and if all agree that end is more readily gained by the co-working of all. Two or twenty or two hundred must be agreed before they can work together successfully.

Co-operative housekeeping requires four corner-stones: (1) A recognition of the end to be gained; (2) A willingness to subordinate personal preferences to that end; (3) Support for the leader or submission to the driver so that the force shall pull all together; (4) A belief that, under the given conditions, it is the best thing to be done and a resolution to stand by the enterprise.

Whenever any number of families can build on these four corner-stones they will be safe in undertaking co-operative housekeeping. Men are becoming so accustomed to working together, especially in the cities, but housekeepers are accustomed to rule their own dominions in their own way regardless of the discoveries of science or the opinions of men. To one who has listened to the caustic criticism of a group of housewives upon the methods of an absent acquaintance, the praises of co-operative housekeeping provoke only an incredulous smile. No painstaking, conscientious woman who likes housekeeping, who feels a pride in the power she wields in her domain, will ever take kindly to any plan which compels her to subordinate her will to that of any number of others. We may as well acknowledge defeat in that direction; but there are, if rumor be correct and appearances not deceitful, many women who find housekeeping irksome, and who do not care to have things as their grandmothers had them, and who are deaf to their husband's pleadings for "mother's mince pies." There are women who would welcome any relief from the constant strain upon nerve and temper and purse which modern conditions are imposing on the city housekeeper. These women are now seeking the "comforts of a home," in boarding-houses, changing them with Easter hats and winter cloaks. To my mind the worst evil of this habit, after its deleterious effect upon the health and character of the children, is the license it gives to a woman to grumble about everything without lifting her finger to improve anything. Chronic complaining has come to be a familiar spectre at gatherings of women.

As already said the incursion of numbers of women into business is a hopeful feature of the present time, since they will find out many ways of the world which will be of use to them. Far more useful is a knowledge of business methods, of public human nature if we may so call it, the temper of masses of people intent on their own ends, than is the right to elect your Congressmen. The subordination of the particular to the general, the individual to the mass which the business world demands, is a great sharpener of character and moulder of opinion. For co-operative housekeeping means that fifty or one hundred persons must have practically the same breakfast on a given morning and the same dinner on a given night. So long as the burden of breakfast conversation is comment on the badness of this or that or the lack of some favorite dish—so long as it is rare to find ten persons under one

roof satisfied with the same thing—so long will success not perch on the banner of co-operative housekeeping.

Variety costs, it is true. Sanitation costs, and we have now become accustomed to paying the bills for sanitary plumbing ; so in time, doubtless, we shall be willing to pay for the delivered meals and for the "by-the-hour" help ; we shall prefer peace and safety to the particular flavor manufactured by the bacteria of one's own kitchen.

As other things become more important to us than the order of covering up bric-a-brac when the parlor is swept or the day of the week when the washing is done or the kind of bread for Sunday breakfast, we may take on one form after another of co-operative industry until in the end, and by degrees we find our burdensome duties all assumed by men caterers, professional housecleaners, public laundries, etc., leaving only that adjustment of values, that harmony, color and flavor which suit the special group, and by which is expressed the highest stage of civilization.

The gregarious habits of the foreign-born population lend themselves to this phase of social economy, but it still remains a question whether American plasticity, adaptability and quick apprehension can be retained in the face of such a levelling process. At present the ambitious mother in her demands upon the children for help in the home processes is giving them lessons of inestimable value in all that goes to make up an efficient life. The very struggles to keep up appearances have their great moral value, if not made with intend to deceive

As houses lose their individuality, the ease of co-operative service increases. Now it is like a red rag to a bull to have the woman who comes to clean venture the remark to Mrs. A that Mrs B. has her floors treated thus and so. For that very reason, Mrs A wishes hers done another way.

Search your hearts and see if that is not the reason why schools for domestic service have not succeeded. Maids cannot be trained in a dozen ways at once, and the one of the dozen they do acquire will be wrong in the eyes of all but one mistress. There is no system in modern housekeeping There are no standards for the schools to educate to ; therefore, there is nothing for it but to permit each housewife to educate her own domestics or to try to undo the education her neighbor has already given, making her work so much harder.

No, it is only the modern woman, the one who has learned to enjoy what others enjoy, to accept as good and sufficient what others accept, who has other means of expressing her individuality beside in the way her beds are made and her tins scoured, who is amenable to the discipline of co-operation Such housekeepers there are, and I believe the number of them will increase as we find out what the essentials of civilized living really are, and which of the old traditions are to be kept and which are to be discarded because they are hindering race progress.

The keynote to the whole lies in that last clause. Are we working for race progress or for individual development? There is no doubt in my own mind that the separate home makes for the best (and may also result in the worst) human character, and that community living makes

for a more rapid elevation of general standards for the race. Far be it from me to presume to say which is best.

But there is here as everywhere a great middle class with affiliations on both sides. What is to be done for it? In this direction I believe there is immediate work to be done by the newly trained business woman in furnishing for the housekeeper many things which are now considered essential to the daily routine of the house, but which on close inspection will be found to be no more essential than is the horse and carriage to the physician practising in a city crossed in every direction by the swift electric car

Light housekeeping is teaching many lessons in this direction, and if women would encourage such attempts as have been made to help them, rapid progress would result.

As an illustration, consider the matter of the laundry, one of the easiest things to co-operate in. Here woman's conservatism comes to the front. "I do not want my table-cloths washed with Mrs. C's or Mrs D's" "I would not dare to send Mary's clothes to a laundry for fear they might be washed with those from a house with contagious disease." And yet these same women will have a woman come into the house to do the work under their own eye who may have a child sick with the very disease, or they will even let her take the clothes home under the fond delusion that home done is well done This is an excellent example of what true co-operation might do for housekeeping Standards of works are more easily agreed upon in this direction; the operations are simpler and inspection is easy. All that is necessary is sufficient capital to carry on the enterprise at a loss for one or two years, while everyone is learning how to make the best use of every part of the plant and while a corps of reliable workers is being obtained by the process of weeding out the unfit. This requires sufficient patience on the part of the managers. The patrons must learn that standards cost money, and that if a shirt is to come from the laundry week by week with the perfection of the newly made article, it will cost for the time required to attain to this perfection, and that the wear on the cloth in obtaining this smoothness and polish is necessarily greater than if it were treated more gently.

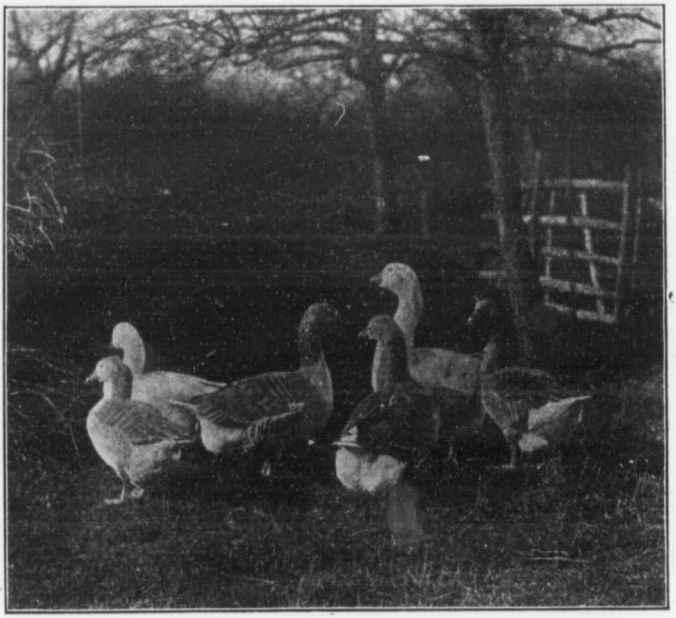
The essential point for success in these co-operative lines is careful supervision by competent persons and sufficient patronage

The same rule will hold in bakeries for bread, cake, pies; in delicatessen shops where salads, entrees and sweets may be prepared under as good condition as in the best-regulated home and under better conditions than are found in most houses Purchasers are too apt to quote "where ignorance is bliss, 'tis folly to be wise," because it takes time and thought to inform themselves about the details of the processes which yield the products they buy.

I am inclined to sum up the whole matter as indicative of one of the highest attributes of civilized man - namely, a capacity for taking infinite pains in the present for the sake of future relief from care and consequent freedom of action

The young man who looks forward to a life of ease in middle age, begins by undertaking the office work and learning every detail of the

business The housekeeper who would secure that freedom from worry implied by co-operative living must prepare herself for it by a careful study of conditions and a sincere desire to make a success of the life she has determined upon. Nothing worth having comes without taking trouble



A Consultation.

Home and Family Life: Ideals and Standards.

"The house is but the shell of the home, a shell meant to inclose and protect, not to crush it." The house should therefore be subordinate to the idea of home. Whatever interferes with the best development of character, whatever causes irritability of temper, whatever is liable to cause ill-health should be banished.

In the Middle Ages when the castles were the homes, the places of refuge, the men learned the art of war to protect their families the more surely. In the twentieth century it is the women who must learn the art of war upon the present foes of the household; and as the skill of

war comes only with training, so the skill of the modern warfare comes only with training in the arts of modern warfare with disease and dirt, as many a mother has found after her child has died of diphtheria or typhoid fever. This warfare means a certain understanding of the fundamental principles of modern science, which women have been slow to learn and men have been afraid to have them learn lest in a sentimental or hysterical fear they become affrighted at the pitless march of nature's forces.

The physician has had a little influence over the housewife, but the sanitarian almost none, in the way of making the home that safe shelter for the family which modern ideals demand.

The individual house is the unit which must be right if the whole community is to be in a safe condition, for each home is tied to the city by wires, pipes and drains, so that it is a necessity to know the city laws and the State laws, for laws are a means of education.

The crowding of more than half the population into cities and the increase of so-called civilized habits which require the quick removal of all disagreeable substances and the efforts to lessen unpleasant labor has led to the perforation of old houses with pipes for the supply of water on tap and for the removal of that which has been used. Theoretically, this is a great advance upon older methods, but these pipes must be not only water but gas tight; they must fulfil their office of quick and complete removal of all dirty water.

Col. Waring said, "The drainage system is a trustworthy ally only so long as the woman of the house holds it under close and careful supervision." There has been placed under her control a means of safety or an engine of destruction, according as she performs her duty or neglects it. She cannot safely delegate her responsibility to her servants. Her own eye must see that at no point has neglect, at any time, permitted even the beginning of filth, for the beginning of filth is the beginning of danger. This is true of the kitchen sink, the ice box, the vegetable closet and especially of the dish pan and cloths. Each housewife should know where all the pipes lead and be able to decide when it is necessary to send for a plumber. It is the woman who must know.

But why? Whose business is it if a family lives in such an unsanitary condition that six out of eight children die? It is because each life is of value to the State. If a man is killed on the railroad, he is paid for at the rate of $1,000 to $5,000. In a town of ten thousand inhabitants where living is cheap we will say $1,000. The normal death rate due to old age, accident, inherited disease is ten to eleven per thousand. If in this town it is, as so often is the case, twenty or twenty-two per thousand, then one hundred lives are needlessly sacrificed to ignorance of sanitary laws. This means a loss to the little community of $100,000; if we take the higher figure, a loss of $500,000.

But this is not all. For one death annually it has been estimated that there are two persons sick during the entire year; that is, there are two years of disabling sickness for each death. The cost of care, of physician and medicine, the disabling effects of grief and of anxious watching are sapping the life of the community and costing it a loss of efficient

force estimated in mere money value. Therefore, it will pay well for any town or village to insist upon sanitary houses, clean streets, good water and safe school-houses.

It has been said that woman is, to-day, the greatest hindrance to social progress. If so, there are two directions in which she should reform: first, in the physical side of the home, making it safe and a means of education in sanitary matters, using it as a school for good habits in food, in exercise, in clothing and all that goes toward the perfection of the human being who is worth to the state all that the state has a right to expect—in other words, in maintaining standards of health; second, in the moral and spiritual ideals, in maintaining standards of human living commensurate with present opportunity.

Students of race development agree that at all hazards the home must be kept intact and family life be maintained. Why is this stand taken in the face of the economic tendencies of the time which are surely encroaching on its position? Not only for the bringing up of healthy children, for in many cases ignorant parents are not so successful as are institutions, but because we all acknowledge that character is the chief basis of all social life and the guarantee of stable government.

A definition of character may not be out of place at this stage. The dictionary gives it as "that individuality which is the product of Nature, habits and environment." Two-thirds, then, is the result of circumstances and teaching, conscious or unconscious. Personal habits have far more influence on character than the careless parent seems to realize, and the sensitive spirit of a child is more seriously affected by reproof in public and by undue restraint than either parent or teacher imagines.

All science points to the need of wise care for the helpless infant in order that the body may perfect its form, and how much more does the individual need the most watchful guidance to develop him into the strong and gentle, upright and tactful man with power to make his place in the world.

In the country home the responsibility which in time devolves upon each human being for his own welfare is gradually taken and joyfully borne. Little by little the duty of caring for dumb animals is placed upon the child, and the pleasure of contributing each day to the comfort of the rest is made plain to him. Usefulness, habits of taking care easily and naturally, are both developed unconsciously in the seclusion of the family circle as never anywhere else.

In the homes of the poor this is often overdone, and the old-young faces with their weight of anxiety so sadden us that we are fain to go to the other extreme with our cherished children and to free them completely from all participation in the daily round, saying, let them be happy while they are young, forgetting that ten years is but a small part of the life they have to live and that this ten years is preparation for the rest, and, furthermore, that if this be not made then it never can be secured in full measure. There will always be a gap, some missing cells in the brain never to be filled out.

It is generally recognized that certain bodily habits desirable to last one's life time are best formed at an early age and once formed are never

lost. The motions are built-in, as it were, into the bodily structure; dancing, rowing, once learned are never foregotten. So various personal and household cares once taken upon one's-self are never again a burden through they may be intermitted for twenty or forty years.

It is not wise to deprive the child of his right to know how to care for himself, because in our short-sightedness we cannot at the moment see and need of his knowing how.

The home must be looked upon as an educational factor of the greatest importance and not as an economic means of leaving. It cannot bear the fierce light of modern business if the phrase "does it pay" is applied to it in the strictly commercial sense. Let us frankly concede that it does not pay; but why should we except it to pay any more than other schools pay. Family life in he home is a school for good manners, good habits in eating sleeping, good impulses and proper restraints – all working into the very bones and sinew of character.

Early civilization in its struggles needed union of effort. Children worked together for common welfare, a welfare which all were to share. It was coöperation on a profit-sharing basis. Bad elements, unjust parents, harsh fathers, scolding mothers existed then as now, but on the whole their was that which made for progress. For a moment let us see how this developed strong character.

1st. Work. Bringing in wood, drawing water, driving cows, running errands, washing dishes.

2nd. Helpfulness. Saving the time and strength of the elders.

3rd. Pride in capacity. A joy in the grown-up responsibility, power to do. It is wrong to deprive a child of this pleasure. We older ones may be glad to shirk, but the healthy child never is. It is a law of growth to use up energy as fast as produced.

4th. Observation of natural phenomena. Often unconscious but rich in instruction.

5th. Variety of capacity. Developed by the very variety which carried on in the house seems so wasteful to the economist.

6th. Self-denial in the present for future good. This is sometimes held to be one of the highest evidences of advanced civilization. No animal or low type of man does this. It may restrain its appetite for the sake of its cub or little chick in the present.

7th. Good manners in general may be taught in the family as is not possible in a hotel or in public.

8th. A fair chance for life. If sick, the others do the work and so protect from strain.

Most of our present troubles in home life come from the fact that we have left out community of work and commonness of aims. The family ideal which demanded the wood and water and chores before the child went to school made a far healthier environment than the modern practice of sleeping till breakfast is over, coming to the table with no appetite, rushing to school because everyone does and not because of a desire to learn The life on the farm is more wholesome in many ways.

To value that which we accomplish by our own effort is also a law of our being. The flower we have planted and watered, the vines that we

have trained, the vegetables that we have weeded and gathered, the summer house we have built – all are dear to us. So with the furniture we have dusted, the bits of bric-à-brac we have collected. It is cheaper to buy machine-hoed vegetables and new bric-à-brac, but these things and our relations to them stand for an ideal—something which is ours, a part of us, something we influence and have power over. A sense of compelling destiny, necessary to our higher life. A slave, a servant does his master's will; a free man obeys his own whim, only if his whim interferes with race progress he is quickly dropped out of the way. So that this minor circle of the family is like one cell in the honey-comb, perfect in itself, but touching others on all sides and being shaped by them. It cannot in all respects be an isolated unit uninfluenced by others. So the home and family ideals are being profoundly affected by industrial and economic conditions to-day, and in the transition are suffering somewhat. They are being pressed into new shapes.

It is given to no one to see very far into the immediate future of American life, but as I peer into the darkness, it seems as if I could see dimly at least one variety of home in which most of the things done by hired service will then be done by contract outside of the house or by occasional workers, as are now the plumbing and carpentry; but the simple duties which remain, the personal services, will be rendered by the inmates themselves in the same spirit of love and devotion as in the days of strong character building. The little children can yet learn to be helpful, to be self sufficient, to be quiet and thoughtful of others, can learn to appreciate beautiful things to read and think and imagine.

You will find by searching here and there a housewife with all the complicated machinery in perfect control, the whole house ministering to the well-being of the family, clean and sweet and yet not smelling of soap and water (or of kerosene), sunlight everywhere, harmony and comfort prevading every room; the mistress never worried or flurried because no more is going on at any given time than can be easily carried by each one, and there is always *slack* which can be taken up. A salmon fisher always has plenty of line with which to play his fish. A tugboat working economically will always have the hawser so it can run out a certain length if the tow strikes a snag. As I see most households, the hawser is taut and at its utmost length all the time. Therefore, when the houseboat strikes one of the many snags of our modern navigation, it is very apt to break loose. Time, energy and temper are all expended in making fast again. Meanwhile what has become of the children—sensitive beings to whom the jar of sudden change is much more severe than to the elders? If there is any one thing which seems more desirable than another for the modern housekeeper, it is to see her reserves, to avoid the truly American habit of straining the line to the limit of strength.

It is this mental balance which it is the duty and privilege of the house mistress to preserve, and it is this which we are allowing ourselves to lose in the general pressure of outside claims tending to push one side the ideals of home life upon which we have hitherto depended.

Things are taking the place of individuals in our system of life, and we may well ponder the following words from E. S. Martin: "The very

best and most important thing in the world is *folks*—all that ails the world, as it is, is a shortage of folks of the right quality. Of everything else there is enough to go around. Consequently, the most valuable gift that can come to earth through man is rightly constituted children."

Housekeeping in the Country.

Out of the haze of the summer horizon two pictures grow clear: one, that of a farm-house on rising ground, with fine old elms a little distance to the south, allowing free play of light and air; with open and screened doors and windows. The wide hall through the middle gives

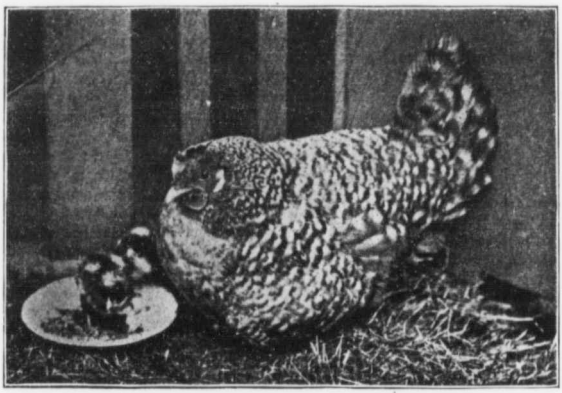
A Merry Milk Maid.

access to four rooms simply furnished, with easily-cared-for but rightly proportioned furniture, walls painted in harmonious shades, with a few really good pictures and ornaments, even if only copies or photographs.

To sink down into the corner of the sofa in one of these rooms is to feel the peace of a well-ordered home surrounding one, and the sounds of the busy but not boisterous life, borne in on the light air, soothe after the harsh buzz of our electrically driven cities. The inviting chambers are also simple in furnishing, without unnecessary toilet articles but with everything for comfort. A few minutes a day and an extra hour twice a week serves to keep them fresh and clean. Dust is not so thick at the week's end as at the hour's end in a city's macadamized thoroughfares.

The house is supplied with running water from a spring on a distant hill; it is brought through a redwood pipe and after being used is carried in a tile drain a quarter of a mile to a corn-field, which returns thanks for the welcome food and drink.

The kitchen is light and airy and fitted with every convenience for doing the work, but it is not littered with patent devices bought at the door and discarded after the first trial. The pantry has a window to the north, and is shaded by a lilac bush which keeps the ground cool and the air sweet. The outhouses, stable, hen-house, tool-house, etc., are at a little distance, and kept so clean that the country pest, flies, cannot find enough to live upon. The garden also is well cared for and is not a source of mosquitoes.



The Plymouth Rock makes a Good Mother.

But most attractive is the dining-room, where all gather promptly around the family table at the appointed time or else take whatever they find in the pantry. The food is served in two or three courses at each meal, each dish bringing out what is best in the rest, as does each member of a well-selected dinner party. Each viand is from the best

materials, cooked to perfection and served at the right moment in the most appetizing manner. This is possible only when the menu is simple and the eaters are on time.

In this harmony of mind and flavor the bewildering variety of the summer hotel is not missed. Jaded appetite revives, and life becomes once more worth living. The adjuncts to the staple foods are taken from the garden in the cool of the morning and cooked while the "glame" is still in them; the fruits of the field and farm are gathered at first hand, and the joy of the realization of one's own efforts is added to the relish of the sun-cooked berries.

This is real housekeeping in the country, with fields for the children to play in and the never cloying barn for rainy days, with leisure for reading and sewing and writing for the elders. No hurry! no worry! Plenty of intelligent "help," but no servants. Who would not live this idyllic life three months in the year?

The other picture will answer that question: a house, pretentious in its architecture, in the village, within a few minutes of the station, post-office, store and club; just in line with the prevailing cloud of dust. Water is supplied by a force pump from a well in the yard and delivered into a cesspool twenty feet away. All the shed-like outbuildings are grouped against the garden fence; garbage barrel and dog kennel, near the clothes-yard. The house is furnished as nearly as possible like a city house and as much "style" maintained. The kitchen is small, dark and poorly furnished with utensils, but the front hall is a marvel of stained glass and mottled wood floor, while one trips over loose rugs in the darkened rooms. Elaborate silver toilet articles lie on white covers in the chambers, and ribbons and lace abound just as in a city house.

The members of the family keep up their city ways, keeping late hours and expecting to be served singly with four to seven course meals on the same plan as they demanded in January, and they berate the cook and the country alternately when anything is missing. The grocer and marketman are driven distracted with their demands for impossible delicacies. In short, they have come into the country bringing all their city habits, and then complain because they are not supplied with whatever they happen to want. Of course, they must have city servants to supply the needs they feel, and yet the housewife never considers that these servants miss *their* accustomed pleasures even more keenly than the members of the family themselves, and that they find more dfficulty in giving the required quality of work. What wonder that it is said so frequently, "Oh, we should so like to keep house in the country in the summer, but no servants will go!" Why should they? To them money is not everything. To do another's will and not your own is hard enough under the best conditions, but in the country the liveried servant is entirely out of place, unless in a few towns where the whole population is a transplanted one or there are enough to keep each other in countenance. The townspeople are as a rule, of the old independent type to whom any badge of service is obnoxious. When one or two families only go into a country town it is a great mistake for them to try and import city ways.

Ordering by telephone from a near market spoils the thoughtless housewife for that careful provision for a month ahead which life in the country demands. As in most things success means attention to details. A good table means a canvass of the country round about, the cleanest dairy and the best kind of hens; for the most progressive farmer who sees it worth his while to raise early vegetables. A search in the neighboring towns will often reveal a butcher or baker who knows his business and is anxious to please. All this must be seen to before the critical members of the family and the guests arrive. Once arranged, let the order of the day go on for three weeks without material change; then variation will be easy as the season advances, and new vegetables, etc. will be in the market. Unexpected guests do not matter in a house where the simple luxury here being advocated exists. Another plate is placed, and if several arrive, some of the reserves in the storeroom are drawn upon for an extra course which will make the already-under-way-food go further. This is true hospitality which is possible only where the cordial simplicity of life in the country gives comfortable serenity of soul. These reserves may consist of various canned vegetables, dried fruits and potted meats; many kinds of crackers in tight tin boxes, cheese in jars; Chinese sweet meats are also available. All these are useful as well for the picnic excursions which are the charm of country life.

It is really wonderful how the appetite grows strong on wholesome fare with sweet air and quiet days Soggy bread and tough meat are no more the necessity of the country than of the town. It is ignorance of ways and means, a clinging to old customs, a carelessness in little things—habits rather than priniciples—which make so many country meals a nightmare. For the farmer who is up at four o'clock the hearty six o'clock breakfast is all right, but the food for the indolent person at eight o'clock, just out of bed, is a different matter. It is still the habit in many country homes to allow the same food for the child as for the grandmother, although the farmer has learned to vary the food of his animals.

In the early days of daguerreotypes and photographs a complete studio travelled from town to town, giving an opportunity for the inhabitants to see themselves as others saw them. There is a good opportunity for a cooking school on wheels, which shall take many of the young women of the country villages into the atmosphere of refinement that really good cooking demands. In this manner, also, taste in table decoration as well as in food flavors will be developed and some modern ways be made familiar to the country-bred women.

Impressions are received through the eye more readily than through the ear, and "Food Fairs" have their uses in this direction, since the tasting, the sample giving and the attractive package all help to carry variety to the country store and within reach of the country provider.

A shyness born of quite life prevents the country girls from adopting many of the really better ways which are a matter of course to more travelled persons. In the great desire to abolish classes in America, to allow all to live alike in as much luxury as one can pay for to make no distinction as to food and clothes, we make the mistake of using *style of living* as an open sesame instead of a patent of nobility, and the family

which adheres to simple living from principle is misunderstood. Of all places the country home is the best in which to establish independence in habits of living, but in fact it is often the most difficult spot of all in which to carry out one's ideas.

Let women's clubs in country towns, instead of imitating city ways, study those possibilities of bettering their own habits that transportation and business enterprise make possible.

The comfort and cleanliness of the colonial country house disappeared before the air-tight stove and three-ply carpet and a mania to have "things handy." The essentials of dignified living need to be illustrated in some definite way either through a model house at the State Agricultural College or by illustrated lectures from town to town. Much may be done by the teachers in country schools to inculcate saner ideas as to the sanitation of a country house, the effect of a neglected sink drain, a damp cellar or a salt meat diet.

The improvement of the building plans of houses in the country would be an excellent subject for some of the young women architects. As it is, the closet shelf is too high to be within range of the housewife's eye. Carpenters seem to be all tall men ; and judging by the position of wash basins, laundry tubs and sinks, plumbers are short men. Our maids go on using the apparatus, wasting strength because they do not know how to explain the reasons why the work is too hard. The mistress also fails to find the cause and is helpless as to the remedy.

In the country there is land enough to permit of a separate laundry and ironing room, in connection with the clothes-yard, which may be protected from marauding dogs and chickens by wire netting. In this way the house may be kept cool and dry. Wood and charcoal may, on occasions at least, be used for cooking, obviating the long after-heat of the coal range.

The hour for dinner is more naturally near noon, since from two to four is the tropical part of the day when tropical habits should prevail. To come in from a walk or a drive just in the glory of the sunset to a long dinner of hot meat and vegetables seems incongruous. Better a simple breakfast and a noon dinner. Then the work of the house is over and does not drag on.

In the winter on the other hand, the early darkness invites the cheer of the laden table and, besides, gives the maids a chance to be out in the sunshine in the middle of the day. This is of great consequence to them, as has been well pointed out by Mrs. Isabella Beecher Hooker.

Country life offers the opportunity for satisfying the creative instinct which, if not stifled, exists in all. There are materials to utilize, rainy days to use and materials at hand – the example of birds and bees, the inspiration of all Nature.

The best counter irritant for the high pressure life of the city is three months in the country, but spent in as great a contrast to that life as is the fresh green field to the asphalt pavement. Country pleasures have a charm of their own, and unfortunate is the child who has never known them ; but a citified country is an abomination, and life after that fashion is a delusion and a snare.

Children in the country have something to do, and that of itself is a pleasure to any normal child. It is most pitiful to see the young people in the city trying to find some occupation allowed by home or city gardens. How much better to give scope to these inborn tendencies! There are always errands which can be made interesting, berries to be picked or flowers to be tended or chickens to be fed. And here is one of the strongest reasons for country life, that in these small duties a sense of responsibility for the life of both animals and plants is fostered. The pear tree will die if water is forgotten; the chickens will starve if they are shut up and not fed. This sense of responsibility, of oneness with all Nature is very essential to a development of good citizenship, and any father or mother who is to indolent to take a little trouble to make, if need be, many sacrifices to attain this education for the children is not worthy the trust given in these young lives.

The child who has grown up with the songs of birds for his lullaby and his earliest recall to the days pleasure, who had seen the dormant trees putting forth their garment of green year after year, who has learned wisdom and patience in the care of chickens and vegetables, who has spent long hours in the berry pasture gathering of Nature's free bounty, has had all his sub-concious character influenced by the great earth-mother, has a view of life and its meanings which no pictures, no book knowledge, no poetry can give. The free and natural life of the country is the child's birthright, companionship with Nature his best education, and it is a crime against his nature to shut him up in asphalted streets and hotel corridors.

It is a good sign that more people of sense are going for their long Summer holiday into the real country, and a comparison of the results of successful country housekeeping would make a most entertaining symposium for the November meeting of any women's club.

SAVING STEPS.

By Mrs. Martha Rennselaer, Cornell University.

The following extracts are taken from a bulletin issued by Cornell University, in their Reading Course series. We are indebted to the University for the use of the illustrations also.

Suggestions from our Friends.

In response to a letter written to a number of farmer's wives we received many replies, containing valuable suggestions and showing interest in the work of the women's department.

We have taken the liberty to print extracts from a few of these, believing that the experience of the writers of these letters will be of value to others:

Systematic Mother brings up her daughter to save steps. "The extra steps that we are obliged to take, make the spirit weak as well as the flesh. There are four little ones and one big one that are constantly

calling me to step to their time, making it seem like trying to march to two-step and waltzes. I was brought up by a systematic mother who had by long, hard experience learned to save the steps, and constantly enjoined her daughters to do the same, and make their heads save their heels. I have tried that for fifteen years and find it works well."

MORE WORK ACCOMPLISHED BY FORETHOUGHT. "When I awaken in the morning I do not rise immediately, but I plan the work of the day, and study to see how I may save steps and accomplish as much work. I find that if I go about my work thoughtlessly I travel over the same ground several times when it is not necessary. When I feel myself getting anxious, I try to relax mind and body, and the work goes more smoothly and I accomplish more."

TRANSFORM DRUDGERY INTO WORK THAT IS JOYFUL BY LOOKING ON THE BRIGHT SIDE. "A few steps more or less don't matter much if the breakfast is a success. To enjoy a car ride I must not confine my attention to counting the railroad crossings. I shall miss the flash-light glimpses of hill and vale, and the long stretches of fertile fields. Now, it seems to me the one thing that all workers need– perhaps farmers more than town's people is to keep above the thought of drudgery– to look beyond the toiling to the result, and so transform drudgery, which no one enjoys, into work ; and when work becomes spontaneous, it is no longer under the law of necessity, but is joyful and free from strain and pain."

MEN NOT INDIFFERENT BUT OFTEN THOUGHTLESS. "I am a farmer's wife, but not one of your drudging kind. I think any woman will agree that we can work from morn till eve, if we are so inclined. I plan to do just so much before dinner, and often have to add a little more steam, but my house is in order and dinner on time, and after the dishes are out of the way, I tidy myself up, and have the afternoon for rest. I am fortunate in having a kind husband, but I think the men are often censured for indifference, when it is only thoughtlessness. Just remind them that you haven't any water to get dinner with, and I know your pail will be filled ; and the wood-box also. Don't do it yourself."

BAD HABITS FORMED IN GOOD HEALTH NOT EASILY CORRECTED. "We get into bad habits of making needless trips from room to room while in good health, when we feel it is not particularly worth while to save steps. These habits cost us dear, however, when at last infirmities come upon us, as they are almost sure to do sooner or later."

NECESSARY TO REST THE BODY BY FEEDING THE MIND. "As a class farmers' wives are expected to do more work than any other housekeepers. We do our own washing, ironing, taking care of the milk, meat, chickens, which women of other callings do not do. We do our own sewing, making over an infinite number of old clothes to save the expense of new ones, as the cash, when the hired help is paid, is in the negative. If you can make us understand that it is just as necessary to rest the body by using the mind a little to read– if the floor dosen't get scrubbed so often— you will do much good. I stopped to read your letter, with a table full of dishes to wash, and a boy down with the measles."

STOP AND THINK HOW MANY THINGS ARE NEEDED BEFORE TRAVELLING TO AND FROM THE CELLAR. "When one is clearing away and washing the dishes from one meal, decide what is to be had for the next, and if there is anything in the cellar or store room that will require time for preparation, bring it back with you when you go there with what remains of last meal. Before beginning to get a meal stop and think how many things are needed from the cellar, and bring as many as possible at a time, and not climb these 12 or 15 steps as many times as there are articles needed."

"I save steps by putting all refuse together, and one trip empties it, without going to the pail with each separate contribution As I go out to empty something, I bring back some wood or coal, so do not return empty handed. I keep a small crock containing brine in my cupboard that will hold about as much salt meat as I use in a week; that saves going down cellar every time the meat is wanted. I pack up my dishes as compact as may be to take from the table, but carry them on a tray instead of putting them in a dish-pan to carry, for they would have to be taken out upon reaching the kitchen, as I do not wash all my dishes together. It is well to have one's meals planned for the day, and then should a friend happen in to dine, it does not make extra work, nor throw one into a fever of excitement in wondering what will be had for dinner,"

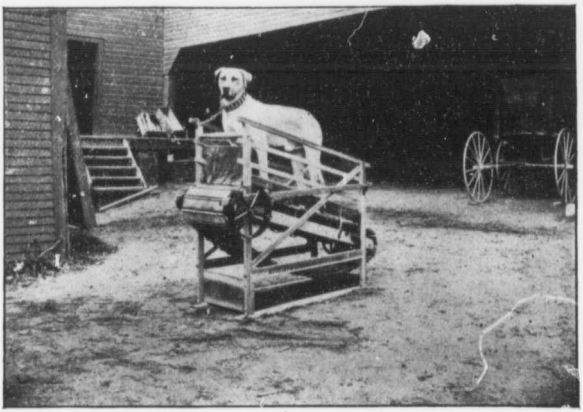
THINK MORE OF THE COMFORT OF THE FAMILY THAN TO OUTDO THE NEIGHBORS. "Many of the unnecessary steps I take are caused by forgetfulness and in putting up things that someone else has left out of place. I find a great saving in having the stove near the sink and cupboards. A cupboard half way down the cellar stairs to put provisions in is better than going down the full length of the stairs. Two or three shelves on the side, that can be reached by just opening the door, will hold many things very conveniently. I wish housekeepers could be made to think more of the comforts and pleasures of their families, and less of trying to outdo someone else, and keep in the latest fashion. When we visit a neighbor and she gives us about three times as many kinds of food as we need, what is there left to do when she visits us? Plain living and high thinking would put money into many a farmer's pocket, and make possible some extra pleasures."

MORE THAN A WASHBOARD, TUB, CHURN AND PANS NEEDED. "In the general farm houses there is little thought given of the steps the housewife and mother take, as farmers too often think it is not necessary for her to have improved kitchen furnishings. He frequently thinks if she has a washboard, a tub, a churn, a few pans and pails and a garden hoe, that is enough—while he has all the late improvements to make his work easy and save his steps. I tried to count my steps while getting breakfast this morning I travelled about two miles while preparing the meal, doing the dishes, preparing chicken feed, pig feed and waiting on the children—for I have five small ones."

APPRECIATION COMPENSATES FOR EXTRA LABOR "My kitchen is off from the main part of the house about seven feet, and there are two

steps for me to go up and down. Our dining-room is in the main house. I often wondered just how many times I went back and forth in a day. One morning I counted 20 times. One way that housewives may save many steps is to have one of those kitchen cabinets that hold all the flour, meal, spices, etc. Dare I say that the men can help more than anyone else to save steps? They can lighten our work by encouraging and praising us. If one of those lords of creation comes in and doesn't even say one word, but smiles, picks up the water bucket, and brings in a lot of wood, or takes up the ashes, how pleased we are! But if he comes in and takes the last drop of water out of the bucket that our poor tired hands have drawn and brought in, that doesn't save steps. Still we would perhaps be too tired to notice this did he not say, 'I never come into this house but the water bucket is dry!' If in taking the water he would say, 'How nice of you to have the water right here for me!' I really believe we would feel compensated for our extra labor."

WEALTH TO THE FARMER TO SAVE HIS WIFE'S STEPS. "I think it very considerate to wish an estimate of the housewife's steps taken in the interests of her husband's prosperity on the farm, or rather, the husband's and wife's prosperity. I deem it wealth to the farmer whose wife's steps are made few, and everthing about the house as convenient as possible, securing her health in order that she may be the helpmeet of her husband."



1. A dreary treadmill.

BUILD THE SINK AND TABLES HIGH SO AS TO AVOID STOOPING. "There should be hooks near the sink for the large dishpan, the handled dishcloth, and a shelf of the height of the sink, which should be so high as to reach almost to the housekeeper's waist, so as to save her from

the painful stooping and also to protect her from the slopping of water. A high stool should stand in every kitchen upon which the mistress can sit while compounding bread, cake and other foods, washing and wiping dishes and cleaning vegetables."

Dog on the churn works mechanically. The dog on the churn keeps his feet continually moving, without making any headway. The floor beneath moves under him, yet he is at the same point in relation to other objects as when he started. When the dog is released he does not know that he has traveled a mile of space, nor is he troubled over to-morrow's churning He is simply, dog fashion, pleased in the present moment's release. He has churned the butter, but he does not know it.

Dull Routine may be Drudgery but Intelligent Interest adds Pleasure. A woman spends 365 days in getting meals and doing the other work necessary in her home, only to realize that the members of her household are still as hungry as they have been, and that they will be hungry every day of the next year. Her work has become routine, yet she is conscious that unless this same round of labor and each little duty had been carefully performed, there had been a serious interruption to the success and happiness of that home. The dog's work is mechanical ; hers is intelligent. She finds a pleasure in her effort to conserve time and strength. The pleasure to herself and family is in a large degree her reward.

Forty-eight Hours of Work Crowded into Twenty-four. One thing is certain, when a woman has crowded forty-eight hours of work into twenty-four, and still finds the stove is not polished, the windows are not washed nor the sewing touched, saying nothing of her inability to find time to read or to return calls, she is required to study what she can best leave undone, and how to do the things she must do with the least expenditure of time and strength.

Catch a Glimpse of the Sunset. She knows her work will be too much like that of the dog on the churn unless she catch a glimpse of the sunset now and then, chat with a friend or enjoy a favorite author. If in the morning she find her kindling ready, or the fire laid, her table ready set, the potatoes peeled, and in place of going to the well, priming the pump and wielding the handle to get enough water to start her breakfast, she can turn a faucet in her kitchen and get all the water needed, her day is started quite easily. Perhaps the water is brought to the barn by a windmill or by a gravity system ; why not into the house ?

Have a Tile Drain for Waste Liquid. Does she have to carry all the waste water to an outside door, down a flight of steps and to a safe distance from the house where it is thrown on the ground ? Could there not be a sink or hopper constructed in the kitchen with trap connection to a tile drain and cesspool and thus save many steps and much hard lifting ? Glazed tile, though more expensive, is safer on account of the joints being cemented which prevents the contamination of well water. How much would it cost ? Tile can be had for four cents a foot ; the drain will be laid from ten to twenty-five feet from the house, depending upon the situation of the well if there be one.

THE EXPENSE IS SLIGHT:

Twenty-five feet of the vitrified tile	$4.00
A sink	1.25
Pipe and trap connection	1.00

The drain will probably be dug by the farmer or by his help when other work is not pressing. The actual cost then will be $6.25 for a permanent means of carrying off the waste water used in the kitchen, or if

2. A window provision cupboard saves steps to the cellar in cold weather.

this water can be utilized in the garden, it may, if there be a gradual incline from the house to the garden, empty itself into a barrel through pipes or a trough laid for the purpose and which may also collect the surplus rain water from the eaves. Fruit and vegetables will flourish by reason of this water supply.

AN ICE BOX SHOULD BE CONSTRUCTED. Unless ice is brought into the house it is necessary to keep the perishable provisions in the cellar.

This necessitates travelling to and from the cellar throughout the entire year, for they must be kept there in winter to avoid freezing. Perhaps the cellar is not conveniently located, nor the stairs easy. With but little expense an ice box can be constructed for use in warm weather. A wooden box lined with oil-cloth, zinc or galvanized iron, having a hinged cover, and with a hole bored in the bottom for the escape of the water, has served many a family for a refrigerator. Shelves may be arranged on the sides so that the ice can be put in at the center. These shelves are perforated or arranged in the form of slats to allow a circulation of cool air. The box should be within another with a space between to be filled with some non-conducting material, as charcoal or sawdust, or a lining may be built within the box affording such non-conducting arrangement. The amount of provisions saved in one season by the use of a refrigerator or ice box more than pays the expense of one; many trips to the cellar are thus saved the housekeeper

A WOMAN MAY MAKE MONEY OUT OF HER ICE HARVEST. An ingenious housekeeper secured permission to use the pond on the farm as she desired She had it thoroughly cleaned in warm weather when the help was not needed with other work. With lumber already on the place she had constructed a small building near the house, and with sawdust drawn from a neighboring mill the house was prepared for the storing of ice. When the ice was ripe for harvesting a good supply was stored for summer use. The following season she sold ice to her neighbors, thus securing considerable spending money. But there are not ponds on all farms.

A COMMON ICE HOUSE AT THE CREAMERY. At the creamery there is a demand for ice, and there is a running stream. Why may not the patrons unite with the owners of the creamery in damming the stream and securing a large quantity of ice? One large ice house may save the expense of several in a community, and the waste of ice much less. In warm weather the patrons in returning from the factory may carry home the ice needed for their own homes. The expense, after the first year, will be slight, and the ice house is there for a term of years.

A WINDOW CUPBOARD SAVES STEPS. Many a thrifty housekeeper has found in cold weather that a window box saves her many trips to the cellar or to a room kept cool enough for provisions. A window in a pantry, dining-room or kitchen is made to move easily up and down. A dry goods box the size of the lower sash is fitted into the window from the outside and fastened to the casing. Holes are punctured in the box, or wire netting may form one side for ventilation. When the window is lowered the provisions are kept as cool as the outside air, and near the place where the work is done. Our illustration (fig. 2) shows such a box as found in one home.

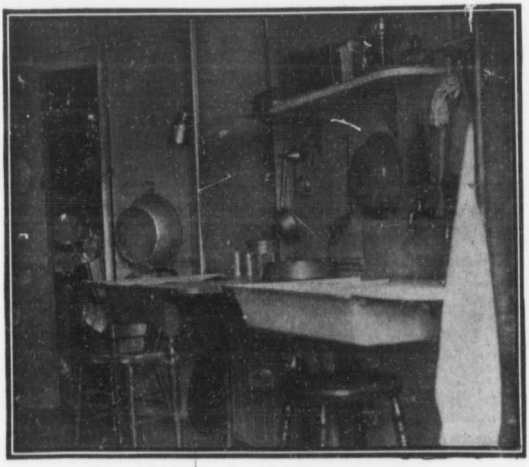
Hints on Kitchen Facilities.

The interior arrangement of houses and the placing of utensils make a great difference in the number of steps to be taken. Articles not often used should be placed in the further corners and give place to those which are constantly in demand. Fig. 2 shows another corner of a kitchen,

with various conveniences and everything within easy reach of the stove.

A HIGH STOOL SAVES LONG STANDING. Note the high stool under the sink which may be used when vegetables are to be prepared or dishes washed. The wire dish cloth over the sink saves both time and annoyance in washing pots and kettles.

USE A TRAY FOR CARRYING DISHES The tray on the floor suggests that the soiled dishes are brought on it from the dining-room to the kitchen to be washed and returned in the same way. The pail at the end of the table is for garbage, and is kept clean and easily emptied, by means of a newspaper placed in the pail each time before it is used again. There are three dredges on the table, one for salt, one for sugar and one for



3. A corner of kitchen showing various means of saving steps.

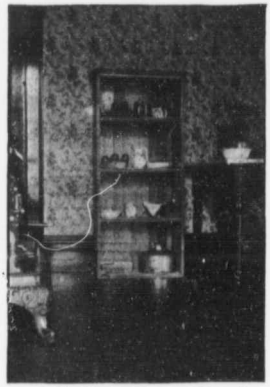
flour On the inside of the open door of the cupboard notice the bag for waste papers, strings and paper sacks. In this cupboard cooking utensils are kept free from dust The shelf at the right affords a large space for unwashed dishes, and the table at the left of the sink a place for clean ones until they may be put away. It is desirable that this space for dishes should be large.

A DROP SHELF IS CONVENIENT AND SAVES ROOM. If the kitchen is small a drop shelf is often used to advantage and is easily constructed. It is simply a shelf attached to the wall by hinges and a prop fastened to the shelf by another hinge. This prop then falls into place easily and the shelf is against the wall when not in use.

THE WORK CONFINED TO A SMALL SPACE. Attention is called in Fig. 4 to a kitchen arranged so as to confine the work to as small a space as

4. Steps are saved by compact arrangement of kitchen utensils.

possible. A window box is at the right where all of the perishable provisions are placed. Next is the little stove where much of the cooking is done. The zinc covered table provides space for dish washing and the



5. The Dummy between cellar and kitchen.

6. The kitchen after the dummy is lowered to the cellar.

preparations of foods. Few steps are needed to secure the various utensils, for they hang within easy reach.

COVER THE TABLES WITH ZINC. It is desirable to have the tables covered with zinc, as they are much more easily cleaned, and afford a smoother surface for work. A trap door in the floor with a hopper underneath connected with the drain affords a convenient place to empty wash water and admits of putting more water on the floor for scrubbing.

A dummy seen in figure 5, constructed with shelves which can be raised from and lowered into the cellar through the floor saves much travelling up and down stairs.

The dummy is raised as in figure 6 by a handle which, in the illustration, is under the table. The weights are run in an extra frame in the cellar by pulleys between frame and weights, between which there is a space for the pulleys to move easily. If one has a cool cellar it takes the place of a refrigerator, and is in many ways a step saver.

MUCH DEPENDS ON A WOMAN'S SAVING STRENGTH. The home is the center of the universe. Woman is the center of the home. Civilization therefore is dependent upon her health and her stimulating influence. All household improvements which can be provided to conserve her strength will add to her power and efficiency.

PRACTICAL SUGGESTIONS FOR A FARM HOUSE.

(FROM FARMERS' BULLETIN NO. 126, U.S. DEPARTMENT OF AGRICULTURE.)

There is no more important undertaking on the farm than the building of the house which is to be at once the owner's residence, his office, and in every sense of the word his home. But notwithstanding this fact there is no undertaking which, sometimes as a result of entirely unavoidable circumstances, more often from other causes, receives so little forethought, so little consideration and so little skillful planning and workmanship.

Too often the farmer finds himself compelled to provide a residence for himself and family on short notice and on a short bank account. The result is an inconvenient, poorly constructed house, and frequently, in the end, money wasted. Many facts and ideas which the farmer has stored away in his mind for such an emergency are crowded out or lost sight of in the press for time. Frequently the nearest village carpenter has to be entrusted with many important details, and the result is far from satisfactory.

It is with the hope of being of service to all who have to build a farm house that this bulletin is written, but particularly is it aimed to help those who have neither the time nor the funds to build as they would like to, and who must therefore begin in a very modest way. To that end some very trite statements are made, some very simple facts stated — facts that everybody knows, but which many are apt to forget at the very time when their remembrance would prove useful.

By carefully designing a house so as to facilitate its subsequent enlargement, money may be saved and its convenience increased. Additions costing $400 might have been so provided for in the original

scheme as to have permitted of their erection for $350, and so on. Poorly lighted and inconvenient rooms and passages, inaccessible chimneys, steep or dark stairways, etc., are all likely to prove obstacles in building additions to houses where the original plans did not take into consideration the probability of such additions.

Comfort, Convenience, and Economy.

Practically speaking, three essentials should be conbined in every farm home; they are comfort, convenience, and economy. It is hardly necessary to enlarge upon comfort as an essential in every home, and particularly in the farm home. The farmer whose duties are always exacting, and which usually expose him to the discomfort of all kinds of weather, needs and deserves a home where, during his hours of rest and recreation, he can enjoy comfort to the fullest extent. In the matter of convenience his wife is perhaps, more to be thought of. Her duties are always numerous and her work never done. Anything that can save her steps or lighten her labor is well worth the effort. Unfortunately there are few farmers who are not obliged to give the closest study to the matter of economy, and there is certainly no greater saving to be accomplished than that which results from carefully prepared plans and the use of proper and durable materials.

Location of the Buildings.

The question of location next deserves attention. The first, and by all odds the most important, consideration is that of healthfulness. Build on low, ill-drained ground and ill-health will follow as inevitably as night follows day. A dry, well-drained soil is absolutely essential, but the question of air drainage should not be lost sight of A hollow, however porous and well-drained the soil, will prove a cold and frosty spot in winter, a hot and sultry one in summer A site too closely shut in by timber will lose what it may gain in shade by the absence of free circulation of air, by the cutting off of every breeze during the sultry days of summer and, in winter, the absence of sunlight is again a drawback.

Advantages of Hillside Slope. All things considered, a gentle hill-side slope offers the greatest advantages, and, if a hillside where the highest land is to the north and west, little more could be desired.

Proximity to Strip of Timber. In many portions of the country a strip of timber of greater or less extent to the north and west is an essential, not only to the comfort of the house but to the comfort of those who are obliged to do chores about it in the severer weather, as well as to the stock which must be quartered near it.

Shade Trees Again, a few fine shade trees are a great addition to both the comfort and beauty of the farm home, and while trees may be planted and will grow in time, other things being equal, the advantage of building near a few fine trees should not be lost sight of.

THE WELL After the consideration of healthfulness there is, perhaps, none more important than that of water. A good well cannot be secured everywhere, and there is no greater inconvenience than to have the well located far from the house. In fact, the nearer it is the better.

THE BARN AND KITCHEN GARDEN. Before definitely deciding on a site some other points should be looked to. The saving of time, labor, and exposure to be gained by having the barn, and especially the stabling, reasonably near the house should not be lost sight of, and therefore suitable sites for these necessary buildings should be decided on before definitely locating the house site. Good soil about the house is also desirable. With good soil an attractive door yard is easily possible, and while the prospective builder may reflect that a few loads of manure will "bring up" the soil, he should also remember that both manure and the time to haul it may prove none too abundant, especially during the first few years of his occupancy. The possibility of locating the kitchen garden conveniently near, and also the chicken house and yards, is worthy of consideration.

DISTANCE FROM THE ROAD. If your location is too far from the road the almost inevitable loneliness and isolation of farm life is intensified. On the other hand, if too near the road all privacy is lost, the dust becomes an annoyance and a source of injury, and there is an undesirable appearance of being crowded for room. A sward 100 feet wide, with a driveway along one edge which approaches the house with a gentle curve, presents the nicest possible appearance and gives the house a setting and an air of repose that nothing else will. If the sward is lined on its outer edges with fine shade trees, an attractive setting is assured.

PLAN OF THE HOUSE.

To much care and thought can not be devoted to the plan of the house itself. Generally speaking, no one is so competent to plan a comfortable, convenient house adapted to all his needs as the farmer himself, unless it be his wife, but it requires plenty of time and thought. To successfully plan a house one should be able to picture to himself every room and every passage.

PRELIMINARY DRAWING. Having conceived the general idea of the house to be built, the next step is to lay it out on paper, and a far better idea of the size and proportion of the rooms will be gained if the drawing is made to a scale. This is not a difficult task. Let one-quarter inch on the 2-foot rule equal 1 foot. Allow for whatever thickness of studding may be decided on and add 1 inch for lath and plaster on each side of partitions, 1 inch each for lath and plaster, for sheathing, and for siding on outside walls, and a plan sufficiently accurate for practical purposes will be obtained. Get the advice and council of the wife, explaining to her whatever on the plans she may not understand. By consulting her conveniences in various ways you may save this busy woman many thousands of useless steps every week of her life. Remember that corners cost money and let in cold. The nearer a house approaches to a square or rectangle the cheaper will be its construction and the more

solid and substantial will it prove when completed. Bay windows are an expensive luxury and are no longer in style. Keep in mind when planning the house the construction of the roof. A simple roof is cheaper and less liable to leak. Valleys are apt to cause trouble.

Employment of Architect or Builder. When your plan is completed to your own satisfaction submit it to a an architect or experienced builder. Get him to point out any possible improvements, and adopt them if you can see that they are improvements. Especially invite him to point out defects. Let him make your working drawings and prepare your bill of materials. Unless you have had wide experience he will save you all and more than his fee will amount to.

The Contract. Somtimes it will pay to let the contract for the whole or a part of the house ; but in case that is done insist upon being your own superintendent with power to reject any material or workmanship that does not come up to your idea of the quality contracted for, and have these conditions specified in the contract.

The Farmer as his own Contractor. As a rule the farmer with his team, more or less of his own time, and often that of one or more hands, will find it cheaper to be his own contractor, hiring such skilled and other labor as may be necessary, doing his own excavating, hauling, etc., contracting directly with a mill for his lumber.

Prices of Millwork. The prices of one mill should seldom be accepted without obtaining those of a competitor. Sometimes a mill at a considerable distance will be willing to pay freight and make lower prices than the local mill. At all events competition should be invited.

Cash Purchases.

Generally speaking, it will pay, where ready cash is not at hand and when it is at all practicable, to borrow the money and pay cash for material, thereby obtaining the lowest prices. Sometimes it is possible to obtain a loan similar to those made by building and loan associations, viz: The lender will advance the money for building, taking as security a mortgage on the house and some land, the money to be paid directly to the persons furnishing materials on order of the owner and to the owner for labor on presentation of the receipted pay rolls, thus insuring that the money advanced is invested in that which constitutes the collateral for the loan.

In the event of a contract being let to a contractor or builder the owner should assure himself that the workmen are being paid promptly, as, in most States, the owner has few rights as against a mechanic's lien, and he should satisfy himself that the materials are or will be paid for without any resource to him.

Cheap Farm Residence.

Owing to a variety of circumstances it not infrequently happens that the farmer finds himself in a position where the building of a residence is a imperative necessity while sufficient ready money for such an undertaking is not available. A cheap, but incommodious and inconvient

structure, or a heavy mortgage with its never failing interest, too frequently an addition to a mortgage already given on the land, seem the only alternatives, and it is especially to mitigate such condition that the simple plans submitted herein have been prepared.

It often occurs, too, that when the occasion arises for adding to the home no practicable, plan presents itself and an entire and expensive remodeling, if not a complete new building, becomes necessary. This situation might frequently have been avoided had the original structure been built along the lines of a preconcieved plan which provided for eventual enlargement.

Two Plans for Residences.

The following plans provide in each case for an inexpensive main building capable of considerable enlargement and development with-

Fig. 1.—A $600 farm house with $500 addition. (Design No. 1.)

out the undoing or alteration of practically any of the original work and the gradual erection of a convenient and commodious home.

A $600 House. The first plan figs. 1, 2, and 3 provides a main building with a living room 15 by 15 feet, a back room 9 feet 6 inches by 10 feet 6 inches with a commodious closet off, with a staircase from the first floor, while upstairs are two chambers, respectively 15 by 15 feet and 9 feet 6 inches by 10 feet 6 inches.

A $500 Addition. The plan provides for a further addition when necessity for enlargement of the house arises and the financial condition of the owner permits. This addition will be 16 by 28 feet, providing on the first floor a living room and kitchen and on the second floor a bedchamber. The kitchen will be 11 by 11 feet 6 inches, with a pantry and stairway to cellar. The walls of the main building are 14 feet and those

of the addition 12 feet, the lower ceiling of the chamber over the living room proving no serious detriment in so large a room. The house as completed should also have a porch 8 by 16 feet, large enough to prove not only an ornament, but a great convenience during the warmer portion of the year.

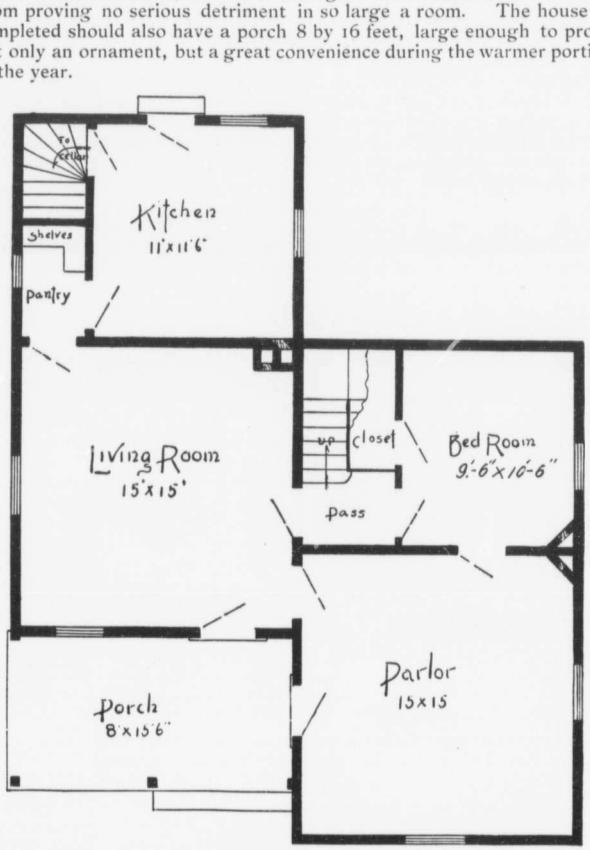


FIG. 2—First floor of $600 farm house with $500 addition. (Design No. 1.)

POSSIBLE ENLARGEMENT. Should additional room ever be required one or two bedrooms can be added to the right of the kitchen. A simple extension similar to the kitchen, across the back of the main building, would give a room opening off the kitchen 11 by 15 feet, which might be used as a bedroom or divided into storeroom, milkroom, etc.

An equally feasible enlargement could be obtained by extending the main building 12 feet back. This would give the room already described off the kitchen and a chamber of equal size above, to be reached by providing a short stairway leading up from the first landing of the original staircase. The window in the back room on the first floor is placed in

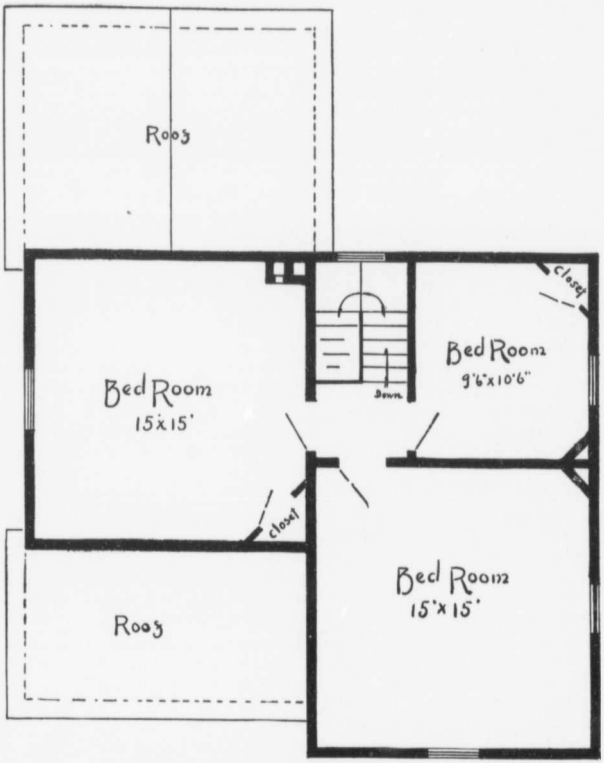


Fig. 3—Second floor of $600 farm house with $500 addition. (Design No. I.)

the side wall to allow of just such an extension. Two chimneys built from the ground permit of heating every room except the last two suggested, and should that addition be anticipated when the original structure is erected an additional flue for that purpose could be added to the large chimney in the living room, the extra flue to project into the corner of the kitchen.

Should necessity or economy dictate, this house could be begun for an extremely moderate sum by building only the portion described as the main building. In such case the backroom on the first floor would have to serve as a kitchen in winter while a cheap lean-to could be provided for summer use. The two bedrooms above would provide ample accommodation for a small family. Later the addition could be put on, the first-floor room to be used as kitchen and dining-room, making the room back of the parlor available for an extra bed-room and reserving the original living room for a parlor. The chamber over the living room, unless needed for immediate use, could be left entirely unfinished until its use as an additional bedroom became necessary, although, if simply floored, it would prove a convenient storeroom until such time as its completion could be affored, quite possibly until after the kitchen, pantry, etc., had been built.

The next step would be the building of the porch, which would greatly add to the appearance of the house and with this completed a very comfortable and convenient house would have been secured, little by little and on the economical and convenient "pay as you go" plan.

Cost of Materials. We give two bills of materials for this house. The first provides only for the main building and for a style of building suitable only to the extreme southern portion of this country. A competent architect, figuring on the bill of materials as given and including in his estimate the entire cost of labor, places the cost of the main building, complete, at $590.58, lumber being figured at $12 per thousand feet, and carpenters' wages at $2.50 per day.

It will be noticed that the bill of materials calls for foundation posts 1 foot long. These, however, should of course extend below the frost line, and their length will therefore vary with the latitude in which the house is built. The price quoted, 25 cents per post, will cover the cost of posts of any ordinary length. Of course the farmer could, in many cases, obtain posts simply for the cost of cutting. No sheathing or building paper is provided for, and only a single floor for the first story is estimated on in giving the cost, but the amount of sheathing lumber and building paper required are given separately, as are also the extra flooring and paper required to double floor the first story.

Anywhere but in the far South these extras will be most advisable, if not essential. On the other hand, the amount of labor, hauling, and excavating which the farmer will be able to perform himself will very nearly offset the increased cost, and so it may be safely stated that even for the most Northern States the farmer can, by performing a portion of the labor himself, erect the main building in a manner that will render it extremely comfortable for but little more than $500, the cost of lumber and wages remaining the same as those figured on.

A bill of materials for the addition is also given, to which the above remarks equally apply. The bill calls for sufficient material to build the addition complete, including veranda, kitchen, etc., and the estimated cost, figured on the same basis as the main building, is $506.96. This expense could, of course, be incurred little by little, as above suggested.

When the house is completed the owner will find himself in possession of a comfortable, roomy house, containing seven good rooms, which has not cost him at the outside over $1,100, and one that is still capable of further enlargement at his convenience.

BILL OF MATERIALS FOR COTTAGE.

[Main part of house, Design No. 1.]

Dimensions, 16 feet x 27 feet. Walls 16 feet. Ceilings, first story 9 feet, second story 8 feet.

5 pieces, 6 inches x 8 inches, 16 feet long	320 feet B. M., for sills.	
2 pieces, 6 inches x 8 inches, 12 feet long	96 feet B. M., for sills.	
37 pieces, 2 inches x 8 inches, 16 feet long	790 feet B. M., for joists, floor, and porch.	
6 pieces, 2 inches x 8 inches, 12 feet long	96 feet B. M., for joists.	
4 pieces, 4 inches x 4 inches, 16 feet long	86 feet B. M., for corner studding.	
150 pieces, 2 inches x 4 inches, 16 feet long	1,600 feet B. M., for studding, plates, ceiling joists, collar beams, etc.	
42 pieces, 2 inches x 4 inches, 14 feet long	392 feet B. M., for rafters.	
4 pieces, 1 inch x 6 inches, 16 feet long	32 feet B. M., for joist bearers.	
3 pieces, 2 inches x 10 inches, 16 feet long	80 feet B. M., for stair horses.	
150 pieces, 1 inch x 3 inches, 16 feet long	600 feet B. M., for roof sheathing, etc.	
Total	4,092 feet at $12 per 1,000	$49 10
18 posts, 6 inches x 6 inches, 1 foot long, at 25 cents, for foundation		4 50
3,600 cypress heart shingles, 5 x 20 inches, at $6.50 per 1,000		23 40
1,800 feet ½-inch pine siding, dressed two sides, at $17 per 1,000		30 60
1,050 feet ⅞-inch No. 2 matched pine flooring, at $23 per 1,000		24 15
112 lineal feet O. G. crown mold, for cornice		2 52
103 lineal feet bed mold		1 28
7 pieces, ⅞ inch x 12 inches, 16 feet long, for planscia		2 80
7 pieces, ⅞ inch x 8 inches, 16 feet long, for frieze		2 06
7 pieces, ⅞ inch x 4 inches, 16 feet long, for fascia		1 03
7 pieces, ⅞ inch x 6 inches, 16 feet long, for outside base, dressed two sides		1 40
7 pieces, ¼ inch x 2 inches, 16 feet long, heart pine for water table		1 00
2 outside doors, 2 feet 10 inches x 6 feet 10 inches x 1¾ inches		6 00
2 casings for outside doors		4 50
3 windows, 4 lights, glass 14 inches x 30 inches, and 3 cased frames for same, with sash weights and cords		14 50
2 windows, 4 lights, glass 14 inches x 28 inches, and 2 cased frames for same, with sash weights and cords		9 00
2 windows, 6 lights, glass 10 inches x 14 inches, and 2 cased window frames for same, with sash weights and cords		7 00
4 pieces, 1½ inches x 4½ inches, 16 feet, dressed two sides; 4 pieces, 1½ inches x 3½ inches, 16 feet, dressed two sides, for corner boards, etc		1 08
Inside finish.		
2 inside doors, 2 feet 10 inches x 6 feet 10 inches x 1⅜ inches		6 00
4 inside doors, 2 feet 8 inches x 6 feet 8 inches x 1⅜ inches		8 00
6 door frames for above, 5⅛ inches x 1⅛ inches		3 00
240 lineal feet pine baseboard, ⅞ inch x 8 inches, dressed two sides		4 00
240 lineal feet base mold, 1 inch x 1½ inches		3 60
240 lineal feet shoe, ½ inch x 1¼ inches		1 60
28 lineal feet window stool, 1¼ inches x 3½ inches, O. G. face		56
385 lineal feet 5-inch casing mold		7 70
42 corner blocks, 5 inches x 5 inches x 1⅛ inches		1 68
32 base blocks, 5 inches x 8 inches x 1⅛ inches		1 92
3 pieces, 1⅛ inches x 12 inches, 16 feet, stepping plank, dressed two sides		2 00
3 pieces, ⅞ inch x 8 inches, 16 feet, risers, dressed two sides		$0 90
3 pieces, ⅞ inch x 12 inches, 16 feet, dressed two sides, for staircases		1 20

1,400 brick and laying, for chimney, including 1½ barrels lime, 1 yard sand	27 00
Plastering, 350 yards, including 7½ barrels lime, 5 yards sand, 4 bushels hair, 5,250 laths, 55 pounds 3-penny nails	87 50
Painting, including 3½ gallons outside primer, 3½ gallons body paint, 2 gallons trimmer paint, ¼ gallon sash paint, 2½ gallons inside paint, or filler and hard oil, 3 coats outside and in	112 00
Hardware, including ½ keg 20-penny nails, 1 keg 10-penny nails, ½ keg 8-penny nails, ½ keg 8-penny casing nails, ½ keg 4-penny shingle nails, 2 pounds 10-penny casing nails, 20 pounds 8-penny casing nails, 10 pounds 6-penny casing nails, 8 pair hinges, 1 front door lock, 6 mortise locks, 1 closet catch, 6 sash fastenings, 4 pair sash lifts, 7 rubber-tipped door stops, ½ gross coat and hat hooks, etc	24 00
Tin work, including 52 lineal feet gutter, 60 lineal feet conductor	12 00
Carpenter work	100 00
Total	$590 58

Extra for sheathing:	
1,500 square feet ⅞ inch sheathing	$18 00
1,800 square feet building paper	3 60
Carpenter work	9 40
Total	$31 00

Extra for double flooring first story:	
450 square feet subfloor	85 40
400 lineal feet strips, 1 inch x 2 inches	45
500 square feet building paper	1 00
Carpenter work	4 00
Total	$10 85

BILL OF MATERIALS.

(Addition to house, Design No. 1.)

Dimensions 16x28 feet. Walls 12 feet; ceilings, first story 9 feet, second story 8 feet.

3 pieces, 6 inches x 8 inches, 16 feet long.	192 feet B.M., for sills.	
2 pieces, 6 inches x 8 inches, 14 feet long.	112 feet B.M., for sills.	
1 piece, 4 inches x 6 inches, 24 feet long.	48 feet B.M., for porch sill.	
53 pieces, 2 inches x 8 inches, 16 feet long.	1,132 feet B.M., for joists.	
88 pieces, 2 inches x 4 inches, 12 feet long.	704 feet B.M., for studding.	
46 pieces, 2 inches x 4 inches, 14 feet long.	430 feet B.M., for rafters.	
2 pieces, 2 inches x 6 inches, 16 feet long.	32 feet B.M., for hip rafters.	
25 pieces, 2 inches x 4 inches, 16 feet long.	266 feet B.M., for studding and plates.	
12 pieces, 2 inches x 6 inches, 12 feet long.	144 feet B.M., for ceiling joists.	
200 pieces, 1 inch x 3 inches, 16 feet long.	800 feet B.M., for roof sheathing.	
Total	3,860 feet B.M., at $12 per 1,000.	$46 32
14 posts, 6 inches x 6 inches, 1 foot long, for foundation, at 25 cents		3 50
5,200 cypress-heart shingles, 5 inches x 20 inches, at $6.50 per 1,000		33 80
40 lineal feet boards, 1 inch x 6 inches, for joists bearers		24
160 square feet beaded ceiling, for porch		3 20
1,000 square feet ⅞ inch matched flooring		23 00
3 pieces, ¼ inch x 8 inches, 16 feet, risers, dressed two sides		90
3 pieces, ¼ inch x 12 inches, 16 feet, dressed two sides, for staircases		1 20
1,400 brick and laying, for chimney, including 1½ barrels lime, 1 yard sand		27 00
Plastering, 350 yards, including 7½ barrels lime, 5 yards sand, 4 bushels hair, 5,250 laths, 55 pounds 3-penny nails		87 50

Painting, including 3½ gallons outside primer, 3½ gallons body paint, 2 gallons trimmer paint, ½ gallon sash paint, 2½ gallons inside paint, or filler and hard oil, 3 coats outside and in	112 00
Hardware, including ½ keg 20-penny nails, 1 keg 10-penny nails, ½ keg 8-penny nails, ½ keg 8-penny casing nails, ½ keg 4-penny shingle nails, 2 pounds 10-penny casing nails, 20 pounds 8-penny casing nails, 10 pounds 6-penny casing nails, 8 pair hinges, 1 front door lock, 6 mortise locks, 1 closet catch, 6 sash fastenings, 4 pair sash lifts, 7 rubber-tipped door stops, ½ gross coat and hat hooks, etc	24 00
Tin work, including 52 lineal feet gutter, 60 lineal feet conductor	12 00
Carpenter work	100 00
Total	$590 58
Extra for sheathing:	
1,500 square feet ⅞ inch sheathing	$18 00
1,800 square feet building paper	3 60
Carpenter work	9 40
Total	$31 00
Extra for double flooring first story:	
450 square feet subfloor	$5 40
400 lineal feet strips, 1 inch x 2 inches	45
500 square feet building paper	1 00
Carpenter work	4 00
Total	$10 85

BILL OF MATERIALS.

(Addition to house, Design No. 1.)

Dimensions 16x28 feet. Walls 12 feet; ceiling, first story 9 feet, second story 8 feet.

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5,200 cypress-heart shingles, 5 inches x 20 inches, at $6.50 per 1,000		33 80
40 lineal feet boards, 1 inch x 6 inches, for joists bearers		24
160 square feet beaded ceiling, for porch		3 20
1,000 square feet ⅞ inch matched flooring		23 00
Extra for double flooring first story:		
420 square feet subflooring		5 00
500 lineal feet 1 inch x 2 inch strips		1 00
500 square feet building paper		1 00
Carpenter work		3 00
Total		$10 00

A SIMPLE METHOD OF DISPOSING OF HOUSE SEWAGE FOR FARM HOME.

By M. J. Quinn, Department of Public Works, Toronto.

In these days of popular education when the people throughout the Province have the benefit of free lectures in dairying, fruit growing, domestic science, etc., it is noteworthy that a knowlege of so important a subject and one so closely allied to the Physical and moral welfare of the people as sanitary science is confined to a limited number.

True, the priniciples of the science is an open book to the medical profession, and is freely discussed at medical conventions, but these discussions are mainly reported in professional journals and do not reach the great mass of the people at all.

In the matter of public sanitation the question of effectually disposing of sewage in small towns and villages, is one of the most important problems that has engaged the attention of scientific men. The great cost of a system of sewerage as used in large places has rendered this course impractable while the use of privy pits and cess-pools has been found objectionable and dangerous. That there is a desire on the part of those living in towns and villages, as well as in less populated districts for what are known as the "Modern Conveniences" of the city is evidenced by the thousands of cess-pools in existence or being built for the purpose of hiding away far beneath the surface of the earth the various organic and liquid wastes from the private residence, public house or institution as the case may be.

Those in authority labor under the dangerous yet common delusion that "so long as the stuff is put down deep enough there is no danger," and herein lies one of the greatest causes of many of the diseases which at times are epidemic in whole communities, viz.: the polution of the water supply.

How is the water supply polluted by decaying organic matter buried deep under the surface of the earth?

In answer to this question a brief explanation of the existing physical conditions may be more convincing than bald assertions without the reasons being given therefor.

Over the whole surface of the earth, where vegetation is possible, nature has provided a most wonderful scavenger system composed of millions of little workers to the cubic foot; these little workers are known as microbes, other species are also found in vast numbers in the water and air.

The natural functions of many of these microbes, tend to produce one result, viz: purification, and when one comprehends that both the sun and air are essential to the life of the various species of microbes which are necessary to the proper decomposition of waste matter, it will be unnecessary to state that in the deep sub-soil where both are impossible, microbe life cannot exist, and hence it is that instead of being converted into life producing matter at the surface of the earth with its dangerous properties destroyed; organic matter is allowed to decay and putrify in

in the deep dead earth until it is washed into some near by well or stream there to cause the innumerable ills produced by drinking impure water.

It may be said that wells are too far removed from cess-pools to be in any danger from this source, but the experience of the village of Lawson, near Basle, in Switzerland will be sufficient to controvert any assertion to that effect.

In the village referred to, which had not within the memory of man been visited by epidemic typhoid, and in which not a single case had occurred for many years, there broke out in the year 1882 an epidemic which simultaneously attacked a large portion of the inhabitants.

About a mile from Lawson and separated from it by the mountainous ridge of the Stockhalden, which was probably an old moraine of the glacial epoch, lies a small parallel valley, the Furlethal. In an isolated house situated in the valley, a farmer who had just returned from a long journey, was attacked by typhoid and within the next two months three other members of the family contracted the disease; the dejecta from the patients together with all the house slops having been emptied into a small brook which flowed past the door.

Ten years previously it had been proven that direct connection existed between this brook and the springs on the mountain side, which supplied the village with water; and as the disease had not occurred in a single house supplied with well water, the authorities suspected that the water supply derived from the springs was infected with the disease germs, and on investigating found conditions existing as related above. In order that the connection between the brook and the springs might be proven beyond doubt, the following ingenious experiment was made; eighteen hundredweight of salt was dissolved in water and then emptied into the brook, with the result that within a few hours the water coming from the springs was of a decidedly salty flavor; a similar experiment with two and one half tons of flour produced no result, showing that while the earth was capable of filtering the water so well that even such minute particles as wheat flour were prevented from passing through it was incapable without the presence of air and aerobes to properly purify and oxidise it.

This remarkable case shows:

1st. That the power of mischief possessed by sewage placed beyond the action of bacteria, is enormous.

2nd. That the diffusibility of typhoid poison in water is practically infinite.

3rd. That water containing the germs of disease may not be purified by filtration through a mile of solid earth (a filter so fine as to arrest particles of wheat flour.

The moral to be drawn from the fore-going is that the greatest care should be exercised in the disposal of waste matters, and that under no circumstances should they be buried deeply under the surface of the earth.

The question will be asked, "how is decaying matter to be disposed of at the surface of the earth without creating a nuisance?" In answer to this question it may be said, that as far as it applies to human excreta, two methods have been found to work successfully viz—the dry earth

closet, the contents of which are dug into shallow trenches at regular intervals, and the septic tank system, the latter being preferable for the reasons that while it performs all the work of the dry earth closet it will also take care of all the liquid wastes from the house, and it requires little attention, while the former depends for its success upon unremitting care.

A brief explanation of the construction and operation of the septic tank system will be of value to those who are anxious to have their premises in the best possible sanitary condition, and who are willing to go to a comparatively small amount of trouble to produce the desired results.

Referring to the accompanying cuts it will be seen that a tank (fig. 1) constructed preferably of bricks or stone well bedded in cement to prevent leakage, is built at such a level as to allow the discharge pipe "D" which is of glazed tiles 4 inches in diameter to leave it at a depth of not more than twelve inches beneath the suface of the earth. Where the surrounding land is level this tank may be located quite close to the building where, if covered with earth (and sodded over if desired) it will not cause any inconvenience. If more convenient it may be placed any distance from the house and the inlet pipe "E" laid along a mound or ridge of earth, and covered with earth to protect it from the frost; this pipe must under any circumstances have a slight continuous fall from the building too, and must enter the tank at the top as shown. If however there is a considerable slope to the land the tank may be buried beneath the surface, it being borne in mind that the branches from pipe "D" which may be taken off at any distance from the tank must not be more than twelve inches beneath the surface and must be perfectly level. From pipe "D" about every two feet ordinary "T" fitting will just give the desired length are run branches of field tiles. (fig. 2) 4 inches in diameter, the total contents of which should be equal to the amount of water which will be discharged at each operation of the valve, and allowing 13 tiles to every cubic foot to be discharged, the number required will be readily found The bend connecting the tank to the system of sub-surface tiles should be of iron, solidly cemented into the bottom of the tank to allow of the canlking in of the valve with lead.

The valve described in this article which is manufactured by the Dominion Flushing Valve Co., of 558 Dufferin St., Toronto, is a comparatively recent invention, and is the only thing of its kind which can be set at any level, will open and close automatically and, as it needs no adjusting it can be put in by almost any person. It overcomes the only objection ever made to the Septic tank system, viz. that when the emptying of the tank depended upon a servant or some member of the family to pull a plug at regular intervals, replacing it when all the liquid had escaped, it was sometimes forgotten and the tank overflowing caused the pipe between it and the house to fill up, thereby causing a great deal of annoyance and expense.

It will be noticed that a dividing wall is built in the centre of the tank to a height of about two inches from the top, the latter space being left for the free passage of fresh air, and a sub-dividing partition of planks with small spaces left between to allow the liquid to pass through is built

From house
E
A.
TANK
B.
No 1
TANK
C
F
G
G
H
No 2.
D To Field Tiles
FRESH AIR

Fig 1.

Field Tiles Unglazed
Glazed Tiles
Field Tiles Unglazed

Fig 2.

in compartment No. 1. The object of the latter partition is to keep the bulk of the solids from overflow "F". Pipe "J" the mouth of which is turned down permits the entry of fresh air which passes over the sewage and up through the soil pipe "E" to the roof. Manholes "G" "G" provide access to both tanks.

The operation of the tank is as follows:—All the sewage from the building enters the tank through pipe "E" filling compartment No. 1, the solids being compelled to float by the gases generated underneath. When this compartment is filled the liquid overflows through "F" into compartment No. 2, the valve "C" of which is closed. When however the liquid rises to the level at which float "H" is set the valve opens, discharging the whole contents of compartment No. 2, be it fifty or five thousand gallons into the system of sub-surface tiles through which it soaks into the earth there to be taken care of by nature as already explained.

As the valve closes automatically when the tank is nearly empty, it will be seen that sufficient time will be given for that which has just been discharged to soak away before the tank fills again and the operation is repeated.

A word respecting the solid portion of the sewage retained in compartment No. 1. The value of the system will be appreciated when it is stated that so thorough is the action of the millions of bacteria on this body, causing the almost immediate disintegration and decomposition of everything entering the tank, that tanks when opened after a year's use, and into which the sewage from buildings containing many inmates was emptied, were found to contain not more than two or three pails full of a kind of earthy substance, from which scarcely any odor was perceptible. It must be borne in mind of course, that no disinfectants are necessary with this system, and nothing in the shape of chemicals should be allowed to enter the tank if the life of the bacteria, which is so essential to its success, is to be preserved.

Regarding the size of the tank necessary, it may be said that for an ordinary family a tank four feet long by three feet wide and from thirty to thirty-six inches high would be sufficient, while for hotels or institutions one large enough to hold about twelve gallons for each inmate would be ample.

The septic tank system has the endorsation of all scientific men who have given the subject of sewage disposal close study. It will not give any trouble if built according to the directions given, and, contrary to the general supposition it will not freeze in winter; if the tiles are placed under a garden most valuable results may be obtained in flowers, fruit or vegetables.

EXTRACTS FROM ADDRESSES GIVEN BEFORE THE ILLINOIS ASSOCIATION OF DOMESTIC SCIENCE.

ADDRESS OF CHAIRMAN, MRS. NELLIE S. KEDZIE,

PROFESSOR OF HOUSEHOLD ECONOMICS, BRADLEY POLYTECHNIC INSTITUTE, PEORIA, ILLINOIS.

The young people who are in our schools to-day will make the men and women of to-morrow, and unless we give them a practical education which will make them ready for all the duties which will come into their hands we are not dealing justly by them.

Sometimes I think we have not been quite thoughtful enough in the kind of education we have given our children. It may be that we have been a little like the story told of Professor Huxley. He ran out and stepped into his carriage which was waiting, saying to the coachman, "Drive just as fast as you can." By and by he saw that he was not reaching the desired point, so he said, "Do you know where you are going?" and the driver answered, "No; but I am driving just as fast as I can."

We have put the children into schools and have felt that they were to be educated but we have not questioned closely enough as to whether that education was going to train them for the lives they were to live, or as to whether it was simply a driving ahead at education in order to give them some training.

There was a time when education meant simply training in religious work, and when the monasteries were responsible for all the education which was given. Then came a time when education meant training of the brain so there should be more pleasure in life, and the educated man or woman found life more full of joy because of this trained brain. But that was a selfish object and the world has grown to feel that unless an education makes a man or a woman of some value to others in the world that education is narrow and selfish; that unless a man be educated in hand and brain, and unless his heart be trained to prompt them both, he is not a thoroughly trained man.

"If you can keep the little fingers busy they are not in mischief, and our teachers have found that if the little hands are kept full there will be no need for discipline. The happiness of working out the idea that comes to the child when he wishes to make something with his fingers gives a new thought to school work and proves Ruskin's statement true, not only in the school but in the home. He said, 'There can be no healthy thought without labor; there can be no happy labor without thought.'

"Seventy-five years ago it took ten thousand men to make a ton of wool into woolen cloth; to-day it takes but nineteen hundred men to

do the same amount of work. This change in affairs has come about through the earnest seeking for better application of time and of labor.

"A great army of men stand in laboratories putting time and strength at their chemical tables to know something more about food stuffs. The agriculturist works for better yield to the acre; the entomologist works to destroy the harmful insect; the miller plans to get the most flour out of the smallest amount of wheat, and the shipper plans to transport food stuffs at the smallest cost. All these are working towards giving the world better and cheaper food. Why should not the girls have their share and be taught the fundamental principles of making all these food stuffs into better foods, be taught to use them more economically, to know something of the purpose for which they are eaten, and above all to know the demand which the body in its energy creates, and to know how to supply that demand?

"In this day and age we ask much more of our women and their daughters than we asked of their grandmothers. We all feel that it is absolutely necessary to send our boys and girls to school. We have learned to put more into the hands of the teachers than in former times. We have found it far easier for one teacher to train twenty girls in arithmetic than for twenty mothers to train their own individual girls. We are learning to-day that it is easier to train twenty girls to cook than it is for twenty individual mothers to train their girls to cook.

We Americans love our homes and we want to make them the best homes in the world. When we build up the homes we build up the young people. When we teach our boys that to be strong, clean, earnest, Christian men is to find the best heritage ever given to man; when we teach our girls to be earnest, faithful, honest women, we are giving them the best teaching we know.

The heart to will, the brain to plan and the hand to do, means the best of attainment."

HOW TO CULTIVATE HABITS OF THRIFT AND OBEDIENCE IN OUR GIRLS AND BOYS.

Mrs. Kate S. McLaughlin, Jacksonville.

Thrift began when men found it necessary to provide for to-morrow as well as to-day.

Thrift is not a natural instinct, but the result of experience, example, and forethought.

The success of a man depends upon his attention to details, and the habits of our children depends upon the little things taught them day by day.

Many of us through sentiment take from our children the independence and self-reliance which should be theirs.

It is often much easier to do a thing than to call the child to do it, but every time we indulge in pampering our children we sow the seeds of idleness, selfishness, and immorality.

The building of a man demands that certain elements of character be sustained from the beginning, such as self-reliance, pluck and energy.

Children should form habits of industry and feel the responsibility of doing something each day.

Make few rules for small children, but see that they live up to them by forming habits rather than by constant discipline.

Do not be austere with children for 'It is as impossible to draw fair and regular characters on a trembling mind as upon a shaking paper.'

Parents should know the character, thoughts and motives of the teacher that she may not undo what they have been trying to accomplish.

"'For the structure that we raise
Time is with materials filled,
Our to-days and yesterdays
Are the blocks with which we build.'"

—Longfellow.

WOMAN'S SHARE IN ECONOMICS.

Miss Perla G. Bowman, Associate Professor of Domestic Economy and Director of the Department, Ohio State University.

Men cannot successfully work alone in the economic world, and when women understand the necessity of economic coöperation then will there be more ideal homes and model nations.

The mass of women choose not business but the home as the field for their activity, and for this labor of love there is small preparation.

Thinkers have come to admit that the education of women is somehow at fault.

Serious women are not now asking for more decorative advantages, but for knowledge which gives to them greater powers for usefulness.

A woman cannot emancipate herself from nature's laws; she must accept them, but in their right conception is a world of liberty.

That the problems of wise living are difficult is small reason why they should be ignored, or why they should be solved by families fleeing to hotels and boarding houses.

Housework may be simplified whenever a body of thoughful women think it worth while to make its simplification a study.

There is an unlimited amount of sentiment written and recognized concerning home life which in our hearts we sacredly cherish; but when women awaken to their true responsibility they must admit that more than sentiment is required to make an ideal family life.

The home with all it implies is equally sacred to men and to women and to every rank in life. If it is to be preserved it must be cared for thoughtfully and earnestly. It has been intrusted to woman, and the girl of to-day is the matron of to morrow.

SANITATION IN TOWN AND COUNTRY.

ARTHUR N. TALBOT, PROFESSOR OF MUNICIPAL AND SANITARY ENGINEERING, UNIVERSITY OF ILLINOIS.

Pure air, pure water, and pure soil still expresses very fully the requirements of sanitary science. If to this be added pure food we may almost be said to have expressed the ideals of the sanitarian.

The marked decrease in the mortality rate in the past hundred years is, of course, not due to sanitary science alone. Hygiene, medical science, more widely diffused knowledge, improved individual conditions—all have been great aids, but by far the greatest portion is due to the improvement in sanitary conditions.

Typhoid fever, typhus fever, malarial fever, diphtheria, diarrhea, cholera, yellow fever, consumption are considered to be propagated by germs, and several of them are water-borne diseases; that is, are conveyed through the agency of drinking water. Epidemics of typhoid fever have frequently been traced to the use of certain wells, families using city water being free from the disease. An instance in the country, where three-quarters of those engaged in a job of threshing were taken down with typhoid fever might be cited, and others detailing the fatalities attending tenant after tenant who had used water from a well which must have been contaminated. Nor are such direful effects confined to typhoid fever or even to water-borne diseases.

The full list of communicable diseases is applicable to country conditions. Malarial fevers, for instance, form a considerable part of country ills. While it is known that the presence of stagnant water and the upturning of old sod are conditions favorable to its genesis, there are unknown factors in the life history of the malarial germ which it is hoped the future will bring to light. In the meantime, thoroughly drained and t'led soil and the absence of decaying vegetable matter tend to make immune conditions. With these effects in mind, compare the value of life, or even of the expense of sickness, with the cost and the necessary effort required to keep proper sanitary surroundings.

That surface pollution may easily reach shallow wells may be seen from an experience told by a friend of mine living in Urbana. Wishing to utillze a kit which had held fish, he buried the two remaining spoiled fish and the salt and brine from it some fifty feet from a well. The result was that in forty-eight hours the water from the well was so salty it could not be used. Many well waters quickly change their chemical analysis after heavy rains; many are found to be polluted by cesspool infiltration. A supposed medicinal spring in this state was proved to be only badly contaminated ground water

In the United States a considerable study of filtration has been made, and in many cities filters are operated with good results. Unfortunately, however, no such care is given to filters as in Europe, and many of the filters in our cities, by the methods of operation in use, are inefficient and misleading. The term "filtered water" may not be synonymous with "purified water," and the layman is warned against reposing too much confidence in the safety of waters so labeled. This statement is likely to

be applicable to many of the private filters and house filters which as they are frequently operated are as likely to be disease-breeding machines as to be purifiers. Without constant care they give only fancied security and are worse than nothing.

It is not always easy to tell a dangerous water. In fact, some of the most impure and dangerous waters are most agreeable to the taste and may be greatly liked for their seemingly desirable qualities. Instances are not rare where wells fouled by cess-pool infiltration to a large extent are very popular because of the coolness and sparkle of the water, and much objection is raised to closing them as a sanitary measure. As the Rivers Pollution Commission of England puts it, 'Unfortunately, excrementitious liquids, especially after they have soaked through a few feet of porous soil, do not impair the potability of water, and this pollution is consumed from year to year without a suspicion of its character, until finally the cess-pool and well receive infected sewage, and then an outbreak of epidemic disease compels attention to the polluted water.'

As Professor Mason says, "So long as a water is bright and pleasant to the taste it is next to impossible to persuade the average owner that it is unfit for use. The carbonic acid gas given off in the decompostion of organic matter acts to make such water more palatable." The fact that the use of water from such wells has seemingly been attended with no bad results does not give it character, for while offering an opening to disease germs it may not yet have received them, or the physical condition of the users may make them at that time immune or not predisposed to harbor the disease germs.

The determination of the sanitary properties ot a water is frequently an intricate and complex matter. Chemical examination alone may not settle its standing. A biological examination may not give a clear title. Such examinations bring up evidence for or against the water or perhaps show symptoms from which a diagnosis may be made, or give data showing incidents in the life history of the water. In fact, the sanitary examination of a water involves determining the life history of the water—finding where it was born, what influences surrounded it, with whom it has associated, whether its bad clothes result from bad surroundings or hard work, whether its bright complexion indicates good health or is the flush of fever, and whether its development has been such as to show that it is trustworthy or doubtful.

The popular idea that a chemical examination determines the properties of a water much as the amount of poison might be determined is a mistake. The chemist, as judge, must know the life history of the water, its source and surroundings, and the chemical analysis is of great value in that it throws light on all this. A series of analyses a single one may be of little value under the varying conditions of filth and ground water and draught may present much evidence. Biological examination may not detect a single typhoid germ, yet the water may still be liable to such pollution. With all the available evidence before him, circumstantial though much of it may be, the judge will be able to approve or to condemn the water.

"Sanitary plumbing" is a popular expression in towns but unsanitary plumbing is quite a common fact, due sometimes to the plumber who does not know his business and scamps his job, and sometimes to the housekeeper who scours the pots and pans and scrubs the kitchen floor but fails to look after dirty fixtures. Besides, settlement of walls and deterioration of pipes and jointing may open joints, and so the plumbing system should be tested occasionally. However, recent plumbing practice is far in advance of old methods, and exposed work, well ventilated pipes, well-formed traps, straight direct runs, proper outlet, and the many little details of good design, together with good workmanship, leave little to be desired; but better an old style slop bucket than costly plumbing poorly planned or even neglected.

To summarize the requirements for sanitary conditions in the country: Promote cleanliness by removing refuse animal and vegetable matter promptly. Discard suspicious well water; the deep well has in recent years reduced doctors' bills amazingly. Drain the cellar and keep it clean; provide it with ventilation and light. Make the whole site of the house dry and clean. Deodorize and disinfect with upturned soil, drained surfaces, air and sunlight. Make cleanliness the criterion."

CONVENIENT FARM HOMES.

MRS. I. S. RAYMOND, PHILA.

The convenient house must first exist in thought.

The house should be the best and utmost expression of the home spirit; the best adaptation of means to ends; the utmost convenience and comfort for all under its roof.

The comfort and convenience of a house do not depend upon its size.

A kitchen 'large enough to eat in' and for the men to sit about in on rainy days is not the one for the housewife to work in.

Have a closet or wardrobe off the kitchen for the outside work clothes of the men.

The wind mill that pumps water for the barn may as well first supply the house.

No house should be without a cistern.

No one needs a bathroom more than the farmer. The expense is not great, and it may be heated by a small oil stove.

It is the 'trouble' rather than the expense that causes many well-to-do farmers to live without household conveniences.

Have plenty of closets and a store room

Have one closet with deep wide shelves for bedding.

Have a medicine closet well equipped for emergencies.

Have a bed room down stairs for the mother.

Place doors and windows so that there will be suitable wall space for furniture.

Have a wide, comfortable porch for the family use on summer evenings.

The time is past when to live on a farm means to live without all semblance of convenience and luxury.

Here in circling fields of wheat and corn around the home a nation's strength is born.

CIRCULATING LIBRARIES.

MRS. S. NOBLE KING, BLOOMINGTON.

From the founding of the first American library in 1731, through the efforts of fifty public-spirited young men in Philadelphia to the building of the magnificent Library of Congress at Washington the library movement has kept pace with other lines of educational work for people living in cities, but it is only recently that active measures have been taken toward giving to the residents of small villages and rural districts the free use of good literature.

As illustrating the value of a library to boys who have little home care, I witnessed an incident in the Bloomington library a few days ago. There is a reading room set apart especially for the use of children. It is furnished with small chairs, an open case of books, and the walls are covered with pictures. On Saturday and on other days after school this room is well filled, but on this particular day I went in about noon and was surprised to see six or seven boys intently reading. On inquiry I learned that they were all out of school for reasons that were obviously unpleasant to them to speak of, but, as they were strangers to the personal care that is regarded necessary in even a moderately well-regulated family, I was impressed with the influence that had drawn these boys out of the alleys into that quite room, where the whole atmosphere was evidently so unlike anything they were accustomed to at home.

The circulating library has been introduced into many states and has been provided for in various ways. It is of especial interest to us that the Illinois Farmers' Institute has already shown itself in favor of this work by sending out, within the past few months, twenty libraries of its own, and the applications for them have greatly exceeded the present supply. These books have been sent out only into country districts, while those sent out by the women's clubs have generally been sent to clubs or schools in small villages.

Black Beauty has been called the "Uncle Tom's Cabin of the animal world," and it is doubtful if any boy can read it without being more kind to domestic animals. Give the children such books as the Bird's Christmas Carol, Little Lord Fauntleroy, the Alcott and Pepper stories, Life in the days of Cicero, Two Arrows, Flamingo Feathers, the Henty Books, and many more that will open up a new world to the boys and girls and teach them to see wonders and beauties all about them in objects that had before seemed only common place, if noticed at all. Nor would we ask for these libraries for farmers more than for people living in small villages, or in towns where there are no libraries.

SHADY NOOKS FOR SUMMER DAYS.

Anything which adds to one's comfort during the warm weather is welcome, and as the life in our climate during the summer months is largely an outdoor one, any bit of shade which Nature or art may provide to temper the rays of the sun is welcomed. The ideas illustrated on this page may all be carried out at slight expense.

Fig. 1. A shady retreat.

Fig. 1. The illustration, "A Shady Retreat," suggests places where one may retire with a favorite volume. If the climb into these retreats is too venturesome for the older members of the household, they will afford much enjoyment for the younger ones. Of course the proper trees are necessary, and as no two are alike the carpenter will have to adapt his construction to the enforced requirements of size and growth.

Fig. 2. In the arrangement for the shady seat at the tennis court, rough cedar posts are planted firmly about eight feet apart, three feet below and seven feet above ground, and a framework is built across at the top, and a double seat with back constructed between. The framework at the top should come forward four and a half feet from the end parts on each side, making the top nine feet over all. A series of hoops is carried along one foot apart, giving a curved top. The brackets for this top and the arms and legs of the seat may be made

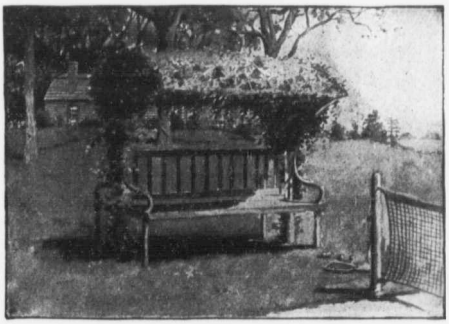

Fig. 2 A shady seat at the tennis court.

from rough limbs with the bark left on. The same material is used for braces. If gnarled limbs can be obtained for these all the better, but the framework is of secondary importance asit will be coveredwith vines by the middle of the summer.

A more simple mode of construction would be to make the top flat. For this use straight pieces instead of hoops. The effect will be less picturesque, but when covered with vines it will make but little difference. If possible face the seats north and south, as more shade will be obtained from the ends when the sun is low in the afternoon.

Fig 3. Often shade is needed at some special point on the lawn, and the illustration given of a summer house with a double-domed roof and two circular seats offers suggestions for that purpose.

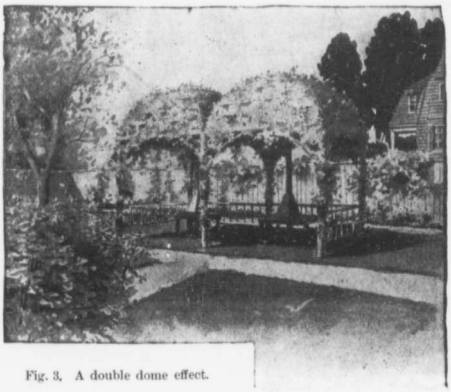

Fig. 3. A double dome effect.

In the arrangement for this summer house six posts are planted. Of course, the size of these bowers must vary according to individual needs, but they must not rise too high above ground. They will be useless for shade if carried up more than eight feet.

Centre posts rise to a height of eleven feet, and long hoops are carried diagonally from corner to corner. These are firmly nailed to the centre posts, on which they cross. Straight pieces are carried around horizontally from post to post; these are supported by brackets. The hoops may also be connected by light stuff. A seat is constructed around each centre post, and by a light railing runs around these sides. At the base the entrance is generally left free of adornment of any sort.

Useful Vines.

Many vines which flower lovers would like to use are worthless for the purpose of shade. The sweet pea would be a general favorite if it grew to a sufficient height, but it does not. The morning-glory and the wild cucumber are both desirable. The former will grow to a height of twenty feet in a season. The wild cucumber also has a rapid growth, and its flowers when seen in masses are very effective; it is to summer plants what the native clematis is to our perennial vines. Some of the

ornamental gourds are available for covering summer houses, their large leaves overlap and afford a dense shade, which is, of course, indispensable in a summer house. The variegated Japan hop will answer for the purpose of shade ; it has a rapid growth and an attractive foliage.

A Shaded Turnstile.

Fig. 4. A shaded turnstile.

An illustration which needs little description is the one in which an old sketching umbrella frame is utilized for the canopy at the top of the centre post, or constructed of a large wooden hoop supported on a wire properly bent. A pot is set on or in the post on each side, and a ladder-like framework of light sticks connects them with the canopy. If desired, wooden boxes may be built in place of the pots. In fact, it would doubtless be a wiser plan to use boxes, as they may be nailed securely to the posts. The centre post must be carried up to a height of seven feet so that it may be passed beneath without chance of brushing the hat of one's tallest guest. Paint in harmony with the house. Nothing will be so pretty or so attractive to plant about this gate as nasturtiums.

The Doorway.

Very often the entrance to a house lacks a canopy or porch, in which case the arrangement shown in illustrations show two light canopy frames, which, when covered with vines, will afford a grateful shade.

Fig. 5. A shaded doorway.

A feature of one is the shelf for

potted plants. Brilliant geraniums are especially effective for the purpose, their glowing blossoms fairly burning against the dark green of the grape vines broad foliage. When constructing the simpler one bring the brackets down toward the base of the doorposts The doorway may be flanked with cacti or other plants of a decorative character.

For planting a door having a canopy I would advise *Celastrus scandens* or Ampelopsis. The native grape may also be used. All three of the above are attractive and nearly always prove satisfactory. — *From The Ladies' Home Journal, *copyrighted by the Curtis Publishing Co., Philadelphia.*

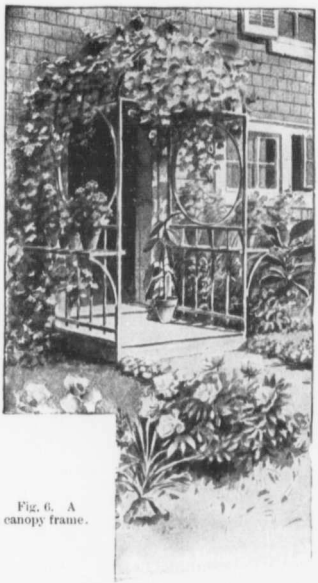

Fig. 6. A canopy frame.

UNIQUE FLOWER STANDS AND POTS.

The ordinary flower-pot has been taken so much as a matter of course that few persons think of using any other receptacles for the plant growths with which they adorn their homes. Yet it is possible to utilize various articles common to most households and at the same time produce something appropriate to the flowers or plants that are put in them.

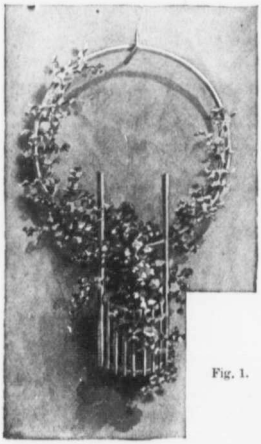

Fig. 1.

These holders, which are easy of construction, may, to a certain extent, take the place of the jardiniere that is now so common.

The Japanese have devoted much time and shown great skill in the arrangement of plants and flowers. They offer good examples of what may be done with a single plant or a few flowers. The results they obtain are artistic and compel admiration. It is often desirable to move plants

from one room to another, or to use a single plant for a decoration; the various devices shown in the drawings with one exception may be very easily moved.

Fig. 2.

A hanging arrangement for flowers is shown in Fig. 1. It is odd and effective, and well worth the slight trouble and expense incurred in constructing it. A carpenter's assistance may be needed for this, and for some of the other designs, but all may be made at trifling cost.

A child's hoop is used for the handle. It passes through two pieces of three-quarter-inch stuff cut two inches wide, that are in turn nailed to two wooden towel rings, one above the other, eight inches apart. A circular piece of wood is fitted into the lower ring, and light strips of wood are tacked on, the whole forming a basket in which the pot is placed. Vines are planted and trained up and around the hoops.

Fig. 2 is intended as a substitute for the fern dishes of silver that grace the dinner-table. This is the ordinary round wooden spice box known to many housekeepers. It is painted a pale cream tint, and when filled with growing ferns is quite as good in effect as the silver dishes, which to my mind, always seem a trifle cold and metallic for flowers and plants. A Japanese stand gives style to this arrangement, which might otherwise be deemed quite commonplace.

This stand may be stained a dark sienna or ebonized. It should not be over three inches in height, as the plant must not be over three inches high, and must not be allowed to interfere with the view of one's neighbor across the table and thus form a decided hindrance to sociability.

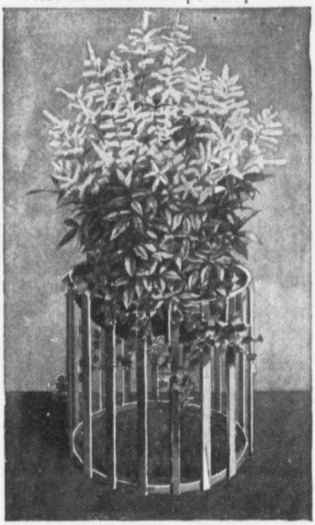

Fig. 3.

The design in Fig. 3 is easily constructed and is unique in effect. It consists of a deep wooden bowl, supported by a stand built of laths nailed to a hoop of the same circumference as the rim of the bowl. It is about two feet in height. A vine is allowed to fall over and twine in this frame, breaking somewhat the rigidity of its lines.

This idea may be used also for potted plants, which could then be removed at will. In constructing it for this purpose omit the wooden bowl and simply use a hoop at the top like the one at the base, having it of a diameter a trifle less than that of the pot so that when placed in it the rim of the pot will project a trifle above it. Another plan would be to again dispense with the bowl, and use a round, flat top of wood for the plants, thus producing a very convenient little low table which would prove especially attractive for the porch. It must, of course, be neatly finished and painted.

Fig. 4.

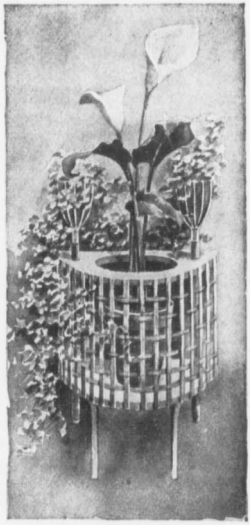

Fig. 5.

Fig. 4 is designed as a receptable for cut flowers rather than for growing plants. It consists simply of an ordinary tin biscuit-can, cut as indicated and painted. It may be partially filled with earth, or weighted in any other way to insure its stability. When in use it may stand on a tile or mirror.

It is Japanese in form, and if care is used in the arrangement of the flowers a rather quaint effect is produced. It is well to use sand at the bottom of the vase for inserting the stems of the flowers, as this will assist materially in arranging them. Such blossoms as the aster, daisy or chrysanthemum may thus be used.

The design shown in Fig. 5 is intended to be bracketed against the wall. Two semi-circular pieces of wood, half an inch thick and fourteen inches on the diameter, are fastened together twelve inches apart by thin strips of wood woven in and out in basket effect. A circle is cut in the upper piece, allowing the flower pot with growing plant to be set in.

Through these two pieces, on each side, are run fruit pickers used by farmers for gathering fruit. The handles are cut to the proper length. The wire cup is used to clasp a goblet from which the stem has been broken. A small flower pot may be used if preferred. From these cups vines may be trained.

The screen in Fig. 6 stands three feet six inches high and is three feet wide. The box in which the pots are placed measures eight inches from front to back and seven inches in depth. It stands on short legs, or it may be put on castors for convenience in moving around.

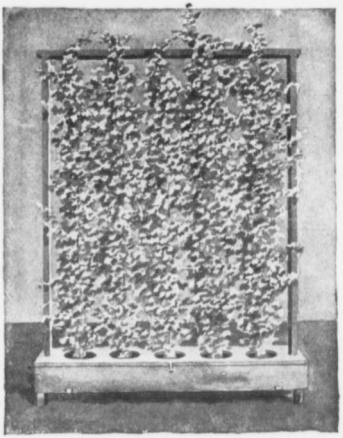

Fig. 6.—A screen of vines.

Fig. 7.—A simple fruit basket used for a single flower.

The front of the box opens on a hinge at the base, allowing for the removal of the plants when desired. Wires are stretched from top to bottom for the vines to twine upon. The screen has a very charming effect. It stands firmly, as all the weight is at the base. It may be easily moved, thus allowing it to be used as a background for brilliant blossoms. Several of these screens placed side by side would be very effective in banking up the side of a room when special floral decorations are needed for any festive occasion.

Of course it is not necessary to adhere strictly to the lines and dimensions of the screen illustrated. Several other forms less severe in outline suggest themselves. A curved top may easily be produced at either side. A hoop also may be hung inside of the frame with effect, allowing the vines to climb around it. If one objects to the boxed-up pots at the base this objection may be easily overcome by substituing a board

and cutting round holes in it a trifle less in diameter than the pots, The board should be set on a frame sufficiently high to allow the pots to clear the floor.

In Fig. 7 is shown a simple fruit basket smoothed up and treated to several coats of paint. A hoop of appropriate size is nailed securely to its rim. This is bent to harmonize with the lines of the basket, and besides affording a decorative feature, is useful as a means of lifting the plant. In painting these holders select such colors as will not offend good taste. Warm tints are the best, as they afford a pleasing contrast to the foliage. Rich dark browns, dull reds, or pale cream tints, are good and effective, yet quiet and restful to the eye. The basket is set on a light stand of polished wood, quite Japanese in design. Though very simple in construction, it gives distinction to the plant and is a protection to the carpet or table on which it rests.—*From the Ladies' Home Journal, copyrighted by the Curtis Pub Co., Philadelphia.*

THE BACK YARD AS A SUMMER RETREAT.

The Englishman realizes the value of flowers in and about his home as a refreshing element. In the city or country the stately mansion or humble cottage is never without its note of color given by potted plants showing at the window or planted in the available space about the dooryard. American city dwellings rarely have more than a few square feet of ground in the rear of the building, but by ingenuity and care much can be done to beautify this little breathing space.

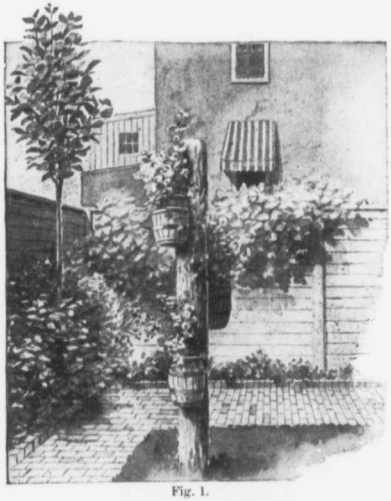

Fig. 1.

Assuming that a high board fence separates our yard from that of our neighbour, let us consider it the frame for a picture. For a space of two feet from the ground paint the boards dark, quiet green. Above this use a cream, white or very pale green. This will make a pleasant, harmonious background for the delicate tracery of leaves and flowers growing against the fence. The clothes lines should be fastened to posts set at the outside edge

of the walk. If you have much space plant the posts at the corners, as shown in Fig. 1. The plot of turf in the centre should not be broken

Fig. 2.

with flower beds. A group of aquatic plants can sometimes be introduced, however, by sinking a half barrel in the ground, as shown in Fig. 2. But do not attempt to sacrifice this valuable space to flower beds or floral effects of any sort unless you have an abundance of room.

Fig. 3.

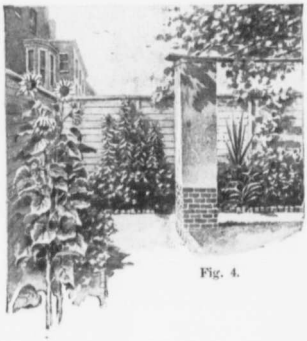

Fig. 4.

With little expense and the expenditure of time some tree trunks can be obtained from the neighboring country, and used instead of the

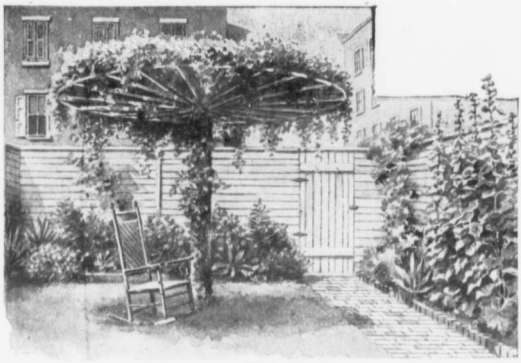

Fig. 5.

posts. Use your discretion in sawing off the branches. Pretty rustic effects can be obtained by leaving some of them longer than others

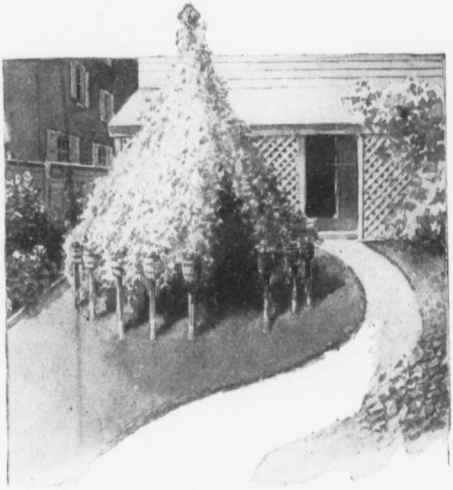

Fig. 6.

These trees can be located at various points to avoid a set appearance and will thus add a picturesque feature. A tub containing trailing vines can be placed on top, as shown in Fig. 3 Brick piers, built at the four corners of the centre plot supporting an overhead trellis (see Fig. 4) will give a very pretty effect.

When space is very limited the idea suggested in Fig. 5 is effective. Plant an eight-inch post firmly in the ground at the desired spot. On top affix a large cart wheel, to be bought at any carriage maker's, or make one of strips of board, each one inch thick by two inches wide and of desired length. Nail these on edge to a circular piece of plank at the centre, and tack a stout barrel hoop around the outside rim to secure the ends of the spokes. Nail the circular plank to the top of your post. Surmount the whole with a half barrel in which are planted quick-growing vines, and you will have, in a few weeks, an artificial tree. Vines can be also trained up the post from the ground.

Another effect is shown in Fig. 6. A number of short rustic posts are sunk in the ground in a circle, leaving out one in the series for

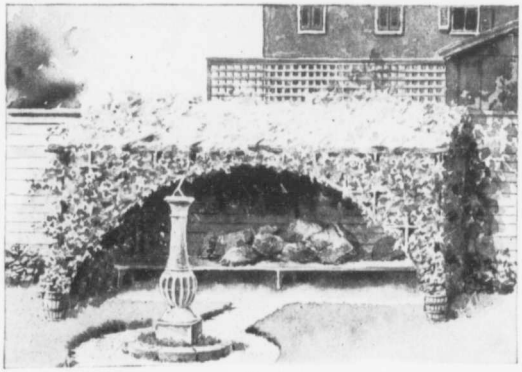

Fig. 7.

a gate-way. A taller centre post is placed in the middle. Kegs containing vines and plants are placed on the tops of the posts. Wires are stretched from each to the other of the centre posts, and a very pretty, artistic arbor is the result.

A good way to treat the top of a fence is shown in Fig. 3. Ordinary barrel hoops are bent and nailed to the back of the fence and supported by laths. Boxes of plants are arranged on brackets, or upon the ledge at the back, if permission can be obtained.

Figure 7 shows another arbor effect at the rear end of the yard, containing a seat, with pillows which may be covered with water-proof cloth. The assistance of a carpenter may possibly be required to construct this feature, but it is not complicated or expensive, and will furnish a pleasant nook for a siesta.

Oftentimes want of space prevents the swinging of a hammock in the yard. A plan is shown in Fig. 8. Have two brackets or davits made of two-inch gas pipe and bent at the blacksmith's. At the hanging ends hooks are welded, to which hang the hammock. The pipes are fastened securely by bands of iron screwed fast to the fence. Wires may be strung overhead upon which vines can be trained.

The back portion of the yard, being the least used and the most seen from above, is the place for whatever large beds or shrubbery you wish to use.

Fig. 8.

By grading from large plants to small even a bed two feet in width against the fence may be made to present a large surface of plants and flowers, while here and there, climbing plants, running up on string trellises, may be carried to the top, and along it ; (see Fig. 9) and if you will select the plants so that you have early and late flowers, you may by trimming out dead foilage, keep your garden always in bloom ; and don't forget the tall, spear-like plants, such as hollyhocks and sunflowers, and even the despised mullen of our fields, which in England is grown in great beauty in gardens, its velvety gray-green leaves and spikes of yellow flowers contrasting charmingly with more showy plants. These plants make a fine background.

In such a tiny garden it is scarcely practicable to have clipped borders, or any large growing trees; but a clump of shrubbery could be made a feature in place of a flower bed. An unsightly pile of stones may be transformed into a pretty feature by filling the interstices with

Vine-wreathed lamp post.

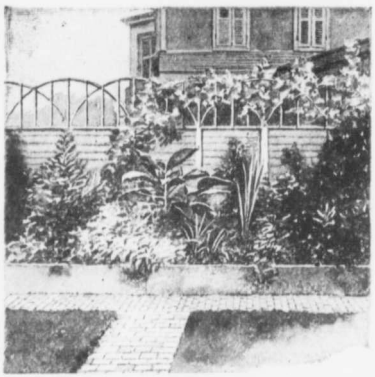

Fig. 9.

earth and planting therein the mullen and thistle. Ordinary corn will give the effect of palms, and will grow fairly well if it receives plenty of sunshine. It needs very little water. Even a brick wall may be made to blossom and fruit as well. It is quite a common sight in England to find small fruit trees trained up flat against the sunny side of a house, and all bearing well.

EDUCATION OF FARMERS' DAUGHTERS.

By Miss Bella R. Dobie, Owen Sound.

The subject, "Education of Farmers' Daughters," covers an immense field of thought, and may be viewed from many standpoints. This essay, while intended specially for farmers' daughters who may become farmers' wives, is not meant to infer that all farmers' daughters will be in the future farmers' wives.

It is the duty of all farmers to give their daughters the advantages of a thorough public school education. This is within the reach of all, but very frequently it happens that they are denied that privilege. Now, this is to be greatly regretted, as it is not just to them that they

should be brought into the world and then denied that very important essential which would more fully enable them to perform their duties and hold their position in the struggle of life.

Education in itself does not mean the acquiring of knowledge alone, but also how to use the same again. Education to the mind is like cultivation of a field: the more thorough the work, the better the result. It broadens and strengthens the mind, and even after school days are over the daughter's intellectual growth should continue and never come to a standstill. With all the possibilities of acquiring knowledge in this vast universe, and with the numerous facilities of education, public and high schools and colleges, it seems that no one need lack the opportunities of a liberal education. But we find a large number of our country girls have ceased to grow intellectually, or worse still, are forgetting nearly all they have learned. In nearly every village there is a mechanics' library, and, if the books are carefully selected and well read, it will be found to be one of the greatest sources of usefulness to our young women.

Never was there a time in history when knowledge was in greater demand than now, and the farmers' daughters of to-day cannot afford to lose the opportunity of keeping themselves well informed on the topics of the day, or of developing their minds to the highest degree.

There is no better way of getting knowledge of truths, facts, great people and grand principles than by reading the good literature which is to be found in all the libraries throughout the country.

Parents should encourage their daughters to make the best of themselves. They should know what they want for their children, whether they want them to be truly good and great and faithful. The careful selection of books cannot be too strongly impressed on the parents' minds, as books either lift up and strengthen or weaken and destroy the mind of the young reader.

One aim of the public school system is to make people capable of thinking and acting, and to accomplish this the minds of the young people must be brought into a knowledge of the lives and thoughts of truly great people. This can be done by introducing into the reading course biographies and historical books. This course, if intelligently followed out, will give ample compensation and real enjoyment for the labor, and in time a love of good literature will be cultivated which will never pass away. Parents will do well to have coming into their homes good magazines and periodicals, which always discuss the newest and best topics of the day.

During the winter months in many country places literary societies are organized, and girls as well as their brothers should attend these. By means of these much important information is acquired, which will give them intelligent views on many subjects. Education in itself should never unfit any girl for farm life. It should be a help to her, and make her more observant of the world about her and the life in it.

Education is just as necessary for the farmer's daughter as for the highest of the land, and it is hardly possible that anyone can be too well educated.

The great aim of the farmer's daughter should be to have a knowledge of how to make a home. She does not necessarily have to marry to do this. But at any time she may be called upon to manage the house. This is a woman's true sphere, where she is specially intended to excel, and the one in which she should take pride in making herself capable. There is a great deal in being a good housekeeper. Educate a girl to the best of her ability, and it will be very incomplete if she has not a thorough knowledge of how to cook a meal and manage every other branch of the housekeeping as well. There would be less unhappy homes if daughters were given a thorough domestic education and training. Bad cooking makes dyspeptics and cranks, and much misery is brought into a home which would otherwise be happy.

Many girls find farm life dull, and do not take the interest they should in the work. Now, they should have an interest on the farm. Let them have a share of the income from the dairy produce for their own use and disposal. This will give them something to work for, and will stimulate them to fresh endeavors. Many farmers take pride in having the very best stock and crops, and try to beautify their farms. Now, in the house the girls should take just as great a pride in reaching that height of excellence, and the dairy especially is where they will find scope for their energies. How delightful it is to go into a well-appointed dairy and see the cream being changed, by the process of churning, into butter, and then worked into rolls or packed ready for the market or home consumption. This is a part of farm work which any farmer's daughter may be proud of being able to do, and it is certainly a part of ner education Thus we see that while an intellectual education is good for the farmer's daughter, the domestic education is just as necessary.

Apart from this education, there are accomplishments which a girl can cultivate if she has time, inclination and talent. A great amount of pleasure and profit can be derived from music in the home. It lifts the mind above the small worries and frictions of everyday life. It is not the one who has the gift who alone has the pleasure, but the whole family is cheered and brightened by the melody of sound. Farmers' daughters have talents and tastes like other girls, and they should have every advantage to develope them to the best of their ability.

The great majority of these girls will in time have homes of their own, and they will need all the knowledge and perfection of mind to train up the next generation. If the parents would take an interest in their daughters' welfare and progress how much help it would be. In the meantime the farmers' daughters should fit themselves for the life which is before them, doing whatever their hands find to do, and doing it the very best they can.