A MODERN FARM HOUSE.

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There should exist a definite relation between the work of a housekeeper and that of an architect. In planning the house the architect should consider the work that is to be done, and so arrange and adjust the plan as to make these duties as light as possible for the prospective housekeeper. Primarily a house was a place in which to eat and sleep, but the present requirements suggest that we should not eat in the same room in which we cook, and that we should have light, well ventilated bedrooms apart from the rest of the house. Most of the household conveniences are modern. It is only within the past few years that they have come into consideration. In the large house the work is greatly increased unless these modern means are used to lighten the labor.

In planning a house many things should be taken into consideration, for a house built for a cold climate will require a different construction from one built for a warm or tropical climate. In the former the floors all need to be double, and the walls must be built as carefully as possible so as to keep out the cold and dampness. While the tropical climate house is very airy and loosely constructed.

The character of the soil has a marked influence on the inhabitants of its vicinity. A gravelly soil of some depth and on a slight slope is the best that can be selected from the point of view of a builder. The soil should be porous and well drained.

The light is one of the most important considerations, as plenty of light and sunshine are essential to health. The house should not be placed near any object that will prevent the sun's rays from reaching it, as large buildings or a grove of large trees. A few trees add to the appearance and make the house cooler in the summer time, while they keep off some of the wind in winter, but a
lot of trees are objectionable. If it is necessary to place one house near another as on a city lot, more light may be secured by the use of prismatic panes of glass which will reflect the rays of light inward. If the house stands cornerwise with the world, as south east and north west, all of the different apartments will receive light from the sun sometime during the day.

Frontage. An easterly frontage is the most desirable, but if that is not practicable a south frontage is good. On the farm, where one has so much land to choose from, it is much easier to obtain a good frontage than it is on a city lot. It is best to have the house situated on a little knoll so as to drain off all the refuse water and to afford a prettier view, for the dryness of the soil is largely dependent on the facility with which the water can run off and the distance from the surface of the subsoil water. Nature's surroundings should also be taken into consideration, for a pretty and artistic background adds as much to the appearance of a home. The ground water level should be at least fifteen feet below the surface of the ground in wet weather to prevent the ground water and ground air from entering the cellar and going up through the house. Every house ought to have a cellar so that this serious objection can be decreased by taking great care in making the basement walls. These walls should be made water and air tight by either cementing on the outside and inside both, or by leaving a cavity between the wall and the earth and filling this with puddled clay and then cementing the inside. There are still many other methods which might be employed as a seal against these objectionable characteristics of the soil.

There are many materials which may be used for building purposes. A few of the most common are stone, lumber, cement blocks, iron and steel. The different localities use different materials. For instance, in a locality where good building rock is found, the houses
and buildings are built chiefly of stone. Many of these materials are necessary for the building of a single house. The combination of some of these for the outer wall gives an artistic effect, as that of frame and stone.

This house is a frame one with a stone foundation which comes three feet above the surface of the ground. It is to be heated by an indirect hot water system, situated in the basement, thus affording plenty of fresh air along with the warmth. The air is to be brought in by an air shaft through the basement wall. The water for the furnace is to be pumped in by a wind mill. The air is allowed to circulate over the hot water pipes, and is then conducted to the respective rooms. The pipes used must have as few bends as possible because curves, and especially right angles, offer a large resistance to the flow of gases or liquids.

The house drain is placed under the basement floor and carried out to some distant place on the farm, where the refuse water may be used for irrigation purposes. The pipe in the cellar is to be of wrought iron, connected with a large earthen ware pipe outside. There is to be a good trap on this pipe just outside of the house.

Lighting. If the house is situated near a natural gas well so that the gas can be piped to the house, it will be cheaper and more satisfactory to use natural gas for lighting purposes, and this may also be used for cooking. The pipes must be of the best material, and put in by a good plumer. They must be put in visible places so that any leakage may be easily detected.

Acetylene gives quite a satisfactory light with slight expense, which may be used in case it is not convenient to use natural gas, or if there is likelihood of natural gas being found in the locality, as the same pipes, if made strong enough to stand the extra pressure,
may be used for the natural gas. The barrel containing the calcium carbide for the acetylene light is kept in a cave outside of the house and the gas piped into the house.

Electricity would be an ideal method of lighting a country house. It is used now in some places to a slight extent and will probably come into more common use in the future. This would necessitate a large expense at the start, but the cost would not be so great afterwards as it would be if the light was secured from a city plant. This would give an excellent light. It would require an "isolated plant" unless the house was near enough to the city to allow it to be connected with its light plant. For the small isolated plant there would have to be a dynamo, a small gasoline engine, and storage batteries besides the regular wiring. This plant would have to be placed in the basement. The power could be used during the daytime for household purposes such as cooking, ironing and churning.

The house plan is drawn on a one-eighth of an inch scale. The outside dimensions are thirty-four feet by thirty-four. The basement walls up to three feet above the ground are to be built of stone and the rest is to be frame.

We will consider the basement first. All the walls and the floors of the basement are to be cemented, so as to keep out all moisture and to afford less lodging place for dust. All the doors except the one leading from the outside into the furnace room are three feet wide by seven feet, and that one is three and one-half feet by seven feet to allow the passage of large objects. The coal room is supplied with bins, and the window is fastened with bolt catches so that it may be taken out when the coal is shoveled in.

The kindling room is eight feet by twelve feet, containing two windows each three feet long by two and one-half feet wide.

The fruit and vegetable room is twelve feet by twelve, large
enough to hold all the canned fruit and what fresh vegetables and fruit it is best to keep in the cellar at one time. The south side of this compartment is to have a tier of shelves.

The laundry is a large room thirty-two feet by twelve, with eight windows so as to afford plenty of light and air to dry the clothes in the house if need be. A rain water pipe is brought in through the laundry wall from the cistern to supply the cold water. The laundry is to have a range with boiler attachments to heat the water. The water for this is brought in through another pipe from the cistern. Both the hot and the cold water pipes are taken to the wash tubs. The two wash tubs are stationary porcelain ones, each three feet wide by four feet long.

The chimney of the laundry stove is connected with a flue joining the furnace which is twelve inches by eight inches.

The first floor. All of the wood work on the walls is to be polished oak, and the walls are to be finished in harmonizing tints of alabastine. The ceiling is ten feet high, and all of the inside doors are two feet, ten inches, by eight feet. The two outside doors are three feet by eight feet.

The sewing room is ten feet by ten feet, with two large windows, three feet by six feet.

The kitchen walls are to be painted with an oil and varnish paint. This is sanitary and can be washed off. The floor is to be hard wood (oak) oiled and polished. The kitchen sink is to be porcelain, with a drain board on one end and a table on the other. The sink must have a good strainer and a syphon trap beneath it, just before the pipe goes through the floor. The kitchen range is to have a boiler supplied with water by the wind mill. This furnishes water for the sink and for the bath room, which is just above on the next
floor, also to the kitchen lavatory.

The cellar stairs go down from the kitchen.

The pantry floor is to be the same as the kitchen floor, and the walls are to be painted in some light tint with oil and varnish paint. The pantry windows are three feet by six feet, and two and one-half feet from the floor. The cupboard between the pantry and the dining room is two feet wide by five feet.

The doors on the pantry side are wooden, and on the dining room side they are glass. On the dining room side they are sliding doors on a double track. The tray slide is to have doors on the pantry side. There is a large supply cupboard in the pantry.

The door between the pantry and the kitchen is a slide door so that it can be pushed either way.

The door between the kitchen and the dining room is a slide door also. This allows one to go through with his hands full and shuts again without banging.

The dining room is sixteen feet by ten feet. It has two windows and an outside door which opens onto the front porch. The floor is of two and one-half inch oak. There is a closet under the front stairs.

The sitting room should be the cheeriest room in the house if
there is any choice. It is the center room of this floor. The floor of this room, the hall and the reception room are to be of white maple. There are double sliding doors between the sitting room and the reception room. The fire place adds to the coziness of the sitting room and affords good ventilation.

The hall, with its broad, wide stairs, is large enough to serve the purpose of a room in case of a large gathering. The railing and the posts of the stairs are of cheery wood. The stair steps are three feet by nine inches.

The front porch is eight feet wide and twelve feet one way and fifteen feet the other way. The porch pillars are nine inches by eight feet. The floor is of oak.

The back porch is to be eight feet by fourteen, with a pine floor, and all screened in. The outside kitchen door opens onto this porch.

The second story. The ceiling is nine feet high, and the doors are most of them two feet ten inches by seven feet high. The walls are all finished in alabastine in harmonizing tints. The wood work is hard wood (oak), oiled and polished so that rugs may be used on the floors instead of carpets. The wood work of the walls is also oak.

The bathroom is one of the most useful rooms in a house. It is here so situated as to be easily reached from all of the bedrooms, and is directly over the kitchen so as to make it easier to get the hot water to the bathroom from the boiler of the kitchen range. The cold water for the bath tub and the lavatory is pumped up by the windmill. The floor and the walls of the bathroom are tiled and glazed over the tiling. There is a closet connected with the bathroom, and the bath-
room is well lighted by a large window. The bath tub is of porcelain, and three feet wide by six feet long, set upon legs six inches from the floor so that it may be cleaned underneath. The outlet pipe from the bath tub has a syphon trap just below the tub before the pipe goes through the floor; this is then carried down to the house drain. The lavatory also has a syphon trap.

The bedrooms are all supplied with closets and at least two windows. The nook, a little extra room, is large enough for a cot in case of a crowded house at any time. The linen closet is six feet by three, giving plenty of room to put all the extra bedding. The attic stairs go up over the front stairs.

Thus we have the house, which is unattractive and useless unless it is a home also.
Second Story