

"THE REQUIREMENTS OF A MODERN HOME"

BY

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The subject of home building is important to every American. The modern home should have a distinct character particularly its own. ^{It should} have architectural beauty and attractiveness as well as all the modern requisites for utility.

It is the work of the architect to consider carefully the needs of the housekeeper in order to make a convenient arrangement which will afford economy and ease, thus there is a distinct relation between the work of the architect and that of the housekeeper.

The housekeeping requirements depend upon the floor plan of the house and economy of work to the housekeeper depends upon its good construction. Interior construction and decoration are greatly related to the economy of work of the housekeeper. While it is well to consider the artistic qualities, these should not be elaborate.

The term household conveniences is a somewhat modern one. "Those arrangements and appliances which make it possible for people to live more comfortable and in larger houses without seriously increasing the cares which they had in smaller ones" and making them more easily accomplished, "are called modern conveniences", or anything which saves labor may be regarded as a modern convenience.

In the modern kitchen and laundry may be found the conveniences which are most appreciated by the housekeeper. Among some of these are the arrangements for dish washing, the kitchen sink with faucets for hot and cold water, drain boards and drain pipes attached to sink. The modern laundry has the stationary wash tubs, water faucets and drain pipes with adjoining drying room which may be used during cold or stormy weather.

Other modern conveniences are the furnace, hot water and steam heating systems which after once put in a house save fuel as well as labor, the bath room, stationary wash stands, the refrigerator closet opening from the kitchen, bed-room closets containing shelves, a general closet for bedding, towels and other articles of common use, a ventilated closet for soiled linens which may be located in the bath-room, and a small closet for brooms, dust pans, etc. These are only a few of the conveniences that might be added.

When considering modern conveniences for the modern home, the subject of modern architecture becomes a necessary factor for its completion. While the interior plan of the house with the

arrangements for conveniences and decorations is the most important consideration to the persons who are to be the occupants, yet the exterior requires almost an equal amount, there being the architectural style, the proportion, together with the surroundings which have to be considered.

The requirements first under consideration before the building ^{can be fully planned} are the hygienic conditions.

A desirable location with pleasant surroundings, an available supply of good water and good drainage are of the greatest importance in choosing a site for a home. The location should be chosen with reference to the frontage which is preferably east or south-east, on east slope of land if any and allowance for plenty of sun shine and ventilation. Provisions should be made for draining the whole area about the house and some distance away by a thorough system of drainage. Subsoil drainage should be resorted to, ^{to} if necessary. This may be done by laying independent lines of tile drains so as to surround the house on all sides and always at a depth considerably below the level of the cellar bottom. In the

case of the city house the drains must be placed under or near the foundation to receive such water as may have reached its actual site. It is preferable to have the drain connection with a dry well but if it must be into a sewer and the return of air from sewer to subsoil under the house must be prevented.

The more porous soils are most desirable for building on account of being more easily drained. To insure a dry cellar proper precautions should be taken for drainage, the outside cellar wall should be tamped with clay and the inside finished with asphalt.

In the arrangement of the rooms in the house, it is of the utmost importance that every room be so located that it may receive sunshine during some part of the day and also have good ventilation. The best ventilation is usually received from the south.

The sitting room or living room of the family is first to be considered as to location. This should be the largest and pleasantest room in the house, having good ventilation, an opportunity for sunshine to enter, and a pleasing view from the windows. It should be of easy access to the other rooms and main hall of the main floor.

The parlor and reception hall are located in the front part of the house with a good view from the parlor windows. The dining room and kitchen should both be well lighted and ventilated, the view from the dining room being especially noted.

Modern methods for heating a house are natural gas, ^{stove} hot air furnace, hot water and steam heat. Natural gas is the most desirable when it can be obtained, as it is of little or no trouble and is a clean method. The hot air furnace is less expensive than hot water or steam. It furnishes fresh air to the house and it also

clean, while in either of the other two ventilation is not provided for.

The steam apparatus is next higher as to first cost although no more expensive in amount of fuel used, but there is one objection in that a low degree of heat can not be produced in the radiator.

The hot water apparatus costs more than the steam^{plant} but is somewhat more economical in the cost of maintenance.

The fireplace might be mentioned also, but to be used in connection with one of the other methods of heating, more for the cheerful appearance which the open fire gives to a room than for heating purposes. It is very convenient to have a fireplace in one or more rooms of the house especially in the sitting room so that a fire may be built on cool days when it is not cold enough to run the other heating apparatus, and It also furnishes good ventilation to the room.

The ventilation of the house may be accomplished by natural or by artificial means. The natural agents are the forces of diffusion, motion and gravity. By the constant diffusion of gases, the circulation of the air or wind which is the most powerful agent and gravity, the most constant and the principle agent of ventilation because of the variations in gravity and the consequent pressure which are the results in variations of temperature, humidity, etc.

The artificial methods of ventilation are by doors, windows, fireplaces, furnaces pipes, chimneys, shafts, courts, aperatures in walls, porous bricks called "Ellison's conical bricks", "Sherringham valve", consisting of an iron box fitted in the wall, the front facing in the room having an iron valve hinged along its lower

edge, and may be opened or closed at will, Tobin ventilator, consisting of horizontal tubes passing through the walls, the outer ends open to the air and the inner ends projecting into the room where they are joined by vertical tubes carried up 5 ft. or more from the floor, thus allowing air to enter the upper part of room.

Ventilation may be provided, where the furnace is used, by an ample supply of fresh air from outside. A proper amount of moisture should be given the air at the temperature at which it reaches the room. An evaporating pan or other device should be placed above the fire pot and should occupy a large proportion of the area of the heating chamber, the supply of water being constant by means of a ball-cock. It should run into or drip into a shallow pan or be supplied to sheets of felt or blankets so that the air will come in contact with the moist surfaces at the temperature at which it is to enter the rooms.

After considering the requirements of the modern house from a hygienic view, they should then be considered from the architectural standpoint. The house should be beautiful and attractive as well as a model of convenience and utility. Beauty is more a matter of intelligence than it is of money.

The house should give the occupants a feeling of appreciation for the beautiful and artistic and to those who look upon it from the exterior, a recognition of its beauty and elegance.

The first and most important requirement is the securing of the proper kind of building material and under all circumstances the best, for it is poor economy to build a house of poor material. The materials for foundation walls should be hard impervious stone or vitrified brick solidly imbedded in mortar. Brick and stone according to their character and quality, absorb more or less water.

Such walls require an impervious coating on the outside in addition to a broken stone filling. If brick is used for cellar flooring they should be laid in cement mortar and covered with a coating of the same or may be laid on in asphalt mastic and covered with it thus forming an excellent cellar bottom. The walls of the cellar should have at least 3 in. air space and the two walls should be tied together by iron or brick ties. Plenty of ventilation should be provided for the cellar by windows.

Materials for the main part of the house may be of lumber, brick or stone according to the desire of the builder or to the amount to be expended in building. The stone or concrete are usually more desirable if precautions are taken for keeping dampness out by a one inch space between stone and lath, although it is more expensive than brick or frame, but it makes a more substantial building.

When the kind of building material has been decided upon then the number of stories and number of rooms shall be decided also the direction towards which the house shall front.

The house should not be located on the lot near to the street, for there should be room in front for a good lawn. Nearness to the street is a very general fault in the location upon the lot of the greater majority of homes. A large front lawn adds to the beauty and appearance of a place.

The proportion and general outline of the exterior of the house are to be carefully considered by the architect. The home should manifest character and individuality, be compact and well shaped and of good outline, that is not too irregular or elaborate in exterior decorations.

The interior decorations should be simple in form. The

wood work should not be elaborate in the carving, it should be varnished showing the natural grain in the wood.

The most desirable method for treating the walls is to have them painted in soft tints using the stensil decoration for border.

At all times let ornamentation be harmonious with construction, considering first the construction and its utility, then consider the decoration and this always simple and in good taste.

The following is the plan of the main floor of the residence of President E. R. Nichols of Manhattan, Kansas, which is a model "modern" residence lately completed.

The rooms are grouped about the sitting room, the central room of the main floor which is by right the largest and most important room of the floor plan. It is located on the east side so as to have the morning sun, is of easy access from the hall and stairs and from east porch, the door on to this porch being a glass door. It is also connected with the parlor, library and dining room by double door openings, the one into the parlor being finished with columns at each side, the other two having sliding doors which lead to dining room and library. There is a fireplace which affords ventilation, a very desirable feature for the living room of the family. The measurement is 16' 4" x 23-1/4". The walls are painted in soft tints, and hand decorated above ^{The picture} moulding for border. The large bay window at the east and the light from library, dining room and parlor, make it well lighted and from all sides. The view of ^{The City} park which can be seen through the west parlor window, and views in all the other directions, make it a very pleasant room.

The hall or reception room (13' 4" x 11' 0"), has a glass door opening on the front porch, a wide sliding door into the

parlor and into the sitting room. There is also a door into the library. A window is situated in front over the first landing of stairs and there is another which lights partly the hall and partly the hall closet under the stairs.

The hall closet is a necessary convenience for placing over shoes, umbrellas, rain coats and other wraps. The hall tree may be in the hall for ordinary use.

A ~~stationary~~ seat is situated along side of the stair case and adds to the furnishing of the hall besides being of use while one is waiting or when putting on "rubbers."

The library (13' 4" x 11'), is well located so that it may be shut off from the other part of the house when it is desired to have it quiet for reading and study. It is well lighted, the wall is of a single tint and the shade is soft giving a feeling of rest and quiet.

The parlor (15' 4" x 12' 10") is used more as a reception room, also as a music room. It is thrown open to ^{The} sitting room by a wide portiere opening.

A beautiful view of the park is seen from the bay window at the west, these windows being shaded by the porch extending along the west side.

The Dining room (16' 4" x 13' 4") is a pleasant well lighted room having three windows and also receiving light from the sitting room. There is a door leading directly into the kitchen and another leading indirectly into it through the pantry. A handsome side board and shelf having glass doors is built in the wall between the two doors which lead to the kitchen. This wall is also painted in a single tint having border decorations of fruit designs appropriate to a dining room.

The Kitchen (13' 4" x 10' 11") is a model of convenience. The range is placed near the door leading down cellar so that hot water tank is placed on the landing at top of cellar stairs. There is a white enameled sink with drain table attached. The doors lead into dining room, pantry, refrigerator closet, porch, where groceries may be delivered, back stairs leading up stairs and to cellar stairs. The room is well lighted having two windows at west, a glass door at south, window over sink which receives light from window over the outside cellar door and which is regulated by a pull cord. The walls are enameled in a light shade and can be cleaned. The floor is of hard maple. This room is very pleasant as all cooking laboratories should be.

The Pantry has a south window, a door into dining room and one into kitchen with ample shelf space. Measurement (7' 3" x 6').

The Refrigerator closet (5' x 3' 9") has a south window and one opening on the west porch which provides for the deposit of ice from the porch. Under this closet is a vegetable cellar in which the ice water from the refrigerator is utilized for cooling provisions.

The porch is carried along the entire west side of the house with the idea of protecting it from the sun. There are turns around the N. W. and S. W. corners of the house so that winds from either direction may be avoided. The porch floor was made by filling in with earth and then cementing it. This floor is not level but has an incline of 1 inch toward the outer edge so that the water may drain off into pipes embedded in the floor at the foot of the wall at intervals around the porch and the floor slopes in the direction of these pipes. A stone balustrade or wall follows

the porch. This breaks the view from the street. The doric columns which support the porch add much to its beauty.

The circular porch on the north east corner is constructed the same as the west porch with the exception to the shape. This porch is more private for the family use and conveniently opens off of the sitting room.

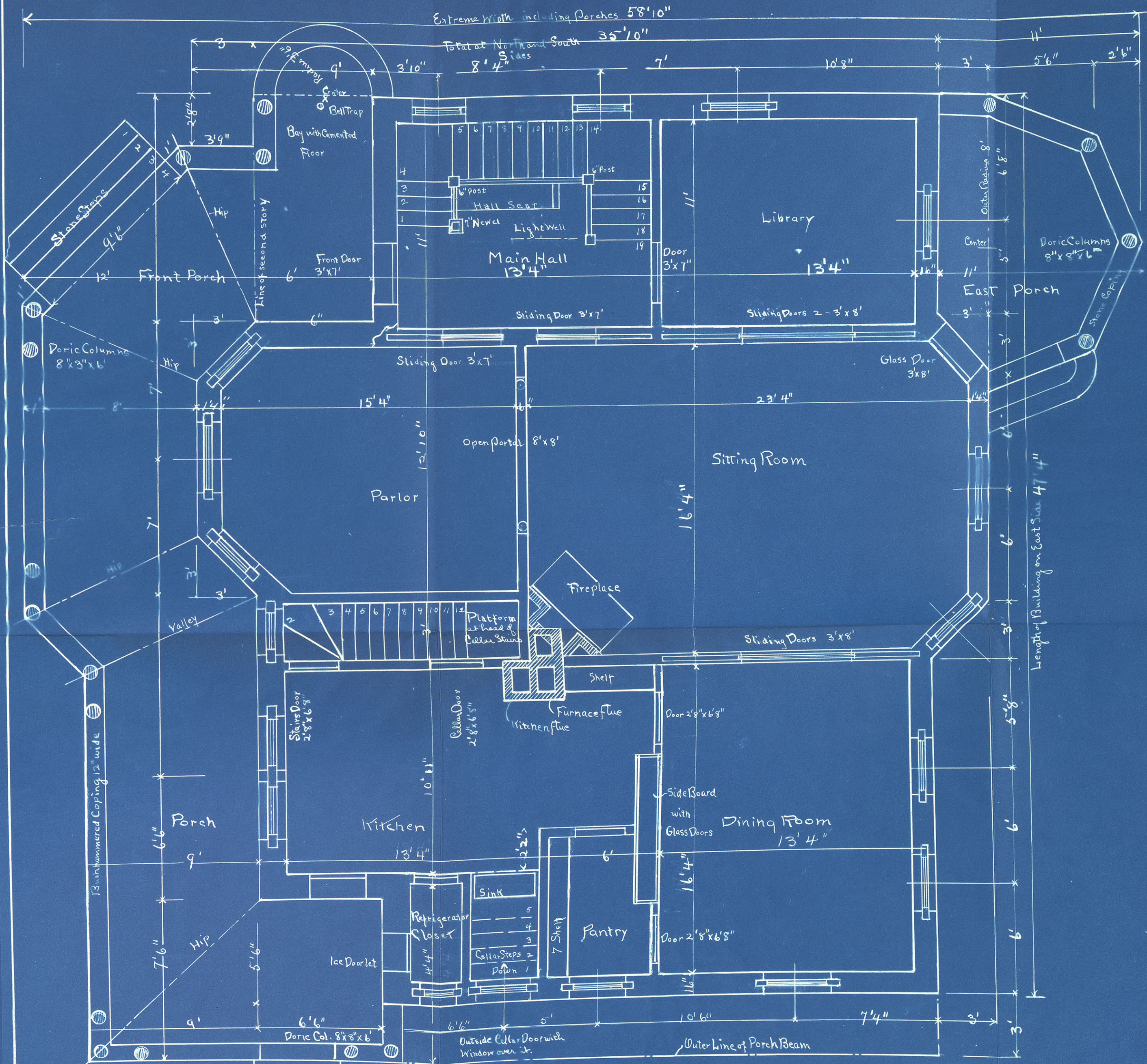
The curved walks were constructed with a view to landscape gardening and shrubs or cedars are planted in the corner space between walks.

This residence presents an exterior appearance of stability compactness and magnificence which adds much beauty to the site which it occupies.

THESIS PLATE.

RESIDENCE of Prof. E. R. Nichols.
Manhattan, Kansas.

Plan of Main Floor.



Crete Spencer. Del.
J. D. Walters. Archt.