A STORAGE WALL
For Kitchen-Dining Areas

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STORAGE WALLS HAVE BECOME POPULAR in recent years, largely because of new kinds of house construction and new developments in house designs. Some of the recent building trends that have affected household storage space are:

1. Attics and basements, which provided space for overflow storage in older houses, are not included in many plans for new houses. Thus it has become necessary to devise new ways to provide storage space. Storage walls are one solution.

2. The rapid acceptance of trusses for roof construction has eliminated the need for interior load-bearing walls and has made it possible to use non-bearing room dividers which can also serve as storage walls.

3. The use of large window areas has reduced the outside wall space available for storage units. This presents a special problem in the kitchen, where numerous items of small equipment and food supplies require storage. It is often necessary to use interior partitions for storage, and a storage wall may be the answer.

4. The storage problem in the kitchen has also been increased by the introduction of wall appliances, such as separate ovens and wall-hung refrigerators, that take up space otherwise available...
Dining side of storage wall. Double doors, 14½ inches wide, are used on all compartments. The narrow doors keep interference to a minimum when they are open. (Fig. 2)

for wall cabinets. One remedy is a storage wall. The storage wall not only has a place in new houses, but it may also prove ideal for kitchens in remodeled houses. In large kitchens with many doors and windows and inadequate wall space for storage, such a unit may be used to separate work and eating areas, giving some degree of privacy and providing much-needed storage space. Or, if rooms are small, a non-bearing wall between the kitchen and dining room can be removed and the storage wall used for storage space and as a partial divider to increase the feeling of space and improve circulation between the two areas.

Characteristics of the Kitchen-Dining Storage Wall

General purpose

The storage wall presented in this circular can serve both as a convenient, compact unit for storing kitchen and dining-room supplies and as an attractive room divider separating the kitchen and dining areas. Doors are on both sides of the wall, permitting access from either area (Figs. 1 and 2). The kitchen side is designed to take care of supplies, such as packaged, canned, and bottled foods, and everyday dishes and silverware, commonly stored in wall cabinets (Fig. 3). Storage is also provided for large platters and trays, and a variety of small electrical appliances for which space often is not available in conventional cabinets. It is assumed that base cabinets, necessary
Efficient storage is provided on the kitchen side of the wall for all packaged and canned foods as well as for everyday dishes and electric utensils. (Fig. 3)

All or most of the supplies used in the dining room can be stored in the dining side of the storage wall. (Fig. 4)
to provide work counters, would be available to take care of kitchen linens, utensils, and cleaning supplies, and of vegetables and fruits not requiring refrigeration. Other perishable and frozen foods would be stored in a refrigerator or freezer.

Usually fewer items require storage in the dining room than in the kitchen. The space provided on the dining-room side of the storage wall should be adequate for all or most of the supplies used in the dining area—dinnerware, linens, silver, flower containers, and table decorations (Fig. 4).

**Principles of good storage**

Good storage means that everything is stored so that it is easy to see, easy to reach, and easy to grasp. It eliminates undue lifting and moving of items and saves work, time, and annoyance. In

Cross sections of storage wall, end view. Dotted lines indicate adjustable shelves. The number of adjustable shelves will depend on the size of the articles to be stored in the section. The dimensions given above are those of the wall built in the family housing research lab at the University of Illinois. Since no one storage wall can satisfy all needs, the one shown here should be used only as a guide in planning your own unit. Suggested adjustments are given on page 10. Working drawings are not available. (Fig. 5)
The height permits all items to be reached by even a short woman standing with feet flat on the floor. The width is sufficient for storing all articles so that they are easily accessible. The depth (front-to-back measurement) varies in the different compartments, depending on the kind of supplies to be stored. In two of the sections, vertical dividers are used to provide enough depth for one row of articles, so that there is no need to place unlike articles behind one another.

**Adjustable shelves.** All shelves in the storage wall are adjustable in height. Metal stripping attached to the side of the compartment has slots at ½-inch intervals into which metal clips are fastened. These clips support the shelves (Fig. 6). Adjustable shelves are extremely important because they provide flexibility in the number, kind, and size of articles that can be stored with a minimum of handling. When articles of approximately the same height are stored on one shelf, only enough space for their easy removal is needed between shelves. It is not necessary to stack unlike articles. Thus waste of space is eliminated and more shelves can be used.

**Drawers and trays.** The number of drawers and trays is kept to a minimum to simplify construction and lessen expense. Only two drawers for silver and a tier of seven trays for linens are used. They are adapted in inside height to the supplies to be stored in them to save space and eliminate excessive stacking.

**Door racks.** In one of the sections on the kitchen side, door racks are used to provide extra space for small food containers. Two kinds of door racks are shown in Figs. 7 and 8. One kind has slots in the sides of the rack into which adjustable shelves are fitted. The other has metal stripping attached to the sides, as in the storage wall proper, for supporting adjustable shelves. The shelves are tilted slightly backwards to prevent packages from falling when the doors are opened. Curtain springs stretched across the racks are another way to prevent falling of packages. The depths of the door racks can vary slightly. The racks used in the storage wall described in this circular are 2 inches deep in the upper compartment and 3 inches deep in the lower compartment.

the storage wall, these principles of good storage have been applied by using shelves, drawers, and trays designed for the width, depth, and height of the articles to be stored.

**Over-all dimensions.** The storage wall described in this circular has been dimensioned to hold the kind and quantity of kitchen and dining-room supplies that are assumed to be in current use by an average family of four or five members. The over-all size is 8 feet wide, 18 inches deep, and 6 feet 6 inches high. It is constructed in three vertical sections, each 32 inches wide, and is divided horizontally at standard counter height, 36 inches above the floor. It stands on a 3-inch-high base which may be recessed to form toe space. Dimensions for each section are shown in Fig. 5.
On the kitchen side

Section A is used for packaged, canned, and bottled foods. The upper compartment holds supplies, such as flour, sugar, shortening, flavorings, and spices, used at the mix center in preparing food (Fig. 9). It is fitted with four adjustable shelves. Racks to hold small containers are on both doors.

The lower compartment of section A is 2½ inches deeper than the upper compartment. It is suited for large food containers, such as cookie, cracker, and cereal boxes, and canisters. It has two adjustable shelves and, like the upper compartment, has racks on each door.

In order to illustrate the uses of the kitchen side of the storage wall, food supplies were placed on the shelves, but no endorsement of any of the products is intended.

Section B, the center section of the storage wall, has an open space 14 inches above counter height.

The door rack on the right is less satisfactory than the one at left because it is more expensive to build and, if the temperature and humidity of the room vary, the wood expands or contracts, making it difficult to adjust the shelves. The shelves on the door rack at left are similar to those used in the storage wall proper. They are inexpensive and easy to adjust. To provide for assorted heights of supplies, the top end of the door rack can be left open.

(Figs. 7 and 8)
Kitchen side, section A. The 9-inch depth of the upper compartment, with racks on the doors, takes care of all the smaller food items usually stored in the kitchen, while the 11⅞-inch-deep lower compartment, also with door racks, provides space for all larger food containers. (Fig. 9)

Kitchen side, section B. Shallow shelves are used for storing canned foods one row deep. The 14-inch height of the pass window permits setting out tall objects and at the same time leaves room for four shelves in the compartment above. (Fig. 10)
forms the back of the linen-storage compartment, which opens on the dining side.

Section C has shelves that extend from the kitchen side to the dining side (Fig. 11). The upper compartment, designed to hold everyday dishes that may be used in either the kitchen or dining room, has five adjustable shelves. The lower part has four adjustable shelves and holds large trays and platters and small electrical equipment that may be used in either the kitchen or the dining room. Adjustable shelves in this compartment are particularly important because they allow for the efficient storage of a wide variety of articles.

Dining side, section A. The shelves in this section are shallow but provide ample room for glassware and decorative pieces. Note that everything is easy to see, easy to reach, and easy to grasp, in accordance with the rules of good storage. (Fig. 12)

that serves as a counter for setting out supplies and as a pass window between kitchen and dining areas (Fig. 10). The 14-inch height is that which is recommended for the space between base and wall cabinets in conventional kitchen arrangements. It provides adequate space for setting out tall articles, yet allows the shelves above to be within easy reach. A grille is hinged on the dining side of the opening. When the pass window is used, the grille snaps up and is held in place by a friction catch.

Above the pass window is a shallow compartment fitted with three adjustable shelves, designed to hold canned foods one row deep. The lower part of the center section is blank except for one drawer to hold everyday silver. (An identical drawer opens on the dining side.) This blank wall
On the dining side

Section A, which backs up the section containing packaged foods on the kitchen side, has shallow compartments designed to hold glassware, flower containers, and other decorative pieces for the table (Fig. 12). The upper compartment has six adjustable shelves and is 8½ inches deep, a depth that permits identical pieces to be stored two rows deep. The lower compartment is 6 inches deep with three adjustable shelves.

Section B has a compartment 12 inches deep above the pass window. It is fitted with three adjustable shelves and holds good dinnerware (Fig. 13). Tall items are stored at the top while the heavy stacks of plates are placed on the lowest shelf for a minimum of lifting. This compartment could be fitted with glass doors to display beautiful dinnerware, if so desired.

The lower compartment has a drawer for silver, and a tier of seven trays for table linens. The trays are shallow to prevent undue handling and wrinkling of the linens.

Section C (Fig. 14) is the same as section C on the kitchen side, described on page 9. The deep shelves in the upper compartment do not permit as convenient storage as shallow shelves would, but they are justified because they accommodate a large supply of everyday dinnerware that is accessible from both the kitchen and dining-room sides of the storage wall.

Adapting the Wall to Suit Your Needs

It is not possible to place a storage wall of the exact size as the one described in this circular in all locations. In fact, it would be undesirable to do so, since storage needs of different families vary. However, the unit shown here should give you ideas for convenient, space-saving storage that can be adapted to your particular situation. For instance, if you wish to build the storage unit into a permanent wall, you can extend the height to the ceiling, with compartments at the top to hold seldom-used articles. You can also increase or decrease the width according to the number of supplies to be stored or the floor space available. If necessary, one whole section can be eliminated.

Another change that can very easily be made is to reverse the two end sections to bring the supplies stored in them nearer to the work center where they will be used first. Everyday dishes should be near the sink, and most of the packaged, canned, and bottled foods should be near the mix center. A cart is recommended to save time and steps in carrying supplies between the storage wall and work centers. A tray kept on the pass-window counter also will save you many steps.
A radical change in the over-all 18-inch depth (front-to-back measurement) of the wall is not recommended. If it is decreased there will not be enough space for storage on both sides of the unit. If it is increased, space will be wasted or items will have to be stored more than one row deep. The variety of depths in the different compartments has been planned purposely to take care of a wide range in the diameter or width of the articles to be stored.

Some changes in the inside partitions may be desirable to provide storage for different kinds of supplies. For example, if less space is needed for the storage of glassware, flower containers, and decorative pieces, the partition in the lower compartment of section A (Fig. 12) can be eliminated and the entire compartment used for storing packaged food. Doors on the dining side of the compartment would then provide access to ready-to-eat foods, such as cereals, cookies, and crackers.
Suggested Arrangements

Suitable locations for the storage wall in relation to the kitchen-dining areas are shown in the diagrams in Figs. 15, 16, and 17. In locating the storage wall, keep this recommendation in mind: the minimum space between the kitchen side of the unit and the base cabinets and appliances opposite it should be 5 feet. Less space will result in crowding and discomfort.

The storage wall can be used in many different shapes and sizes of kitchens. (Fig. 15)

In the plan pictured at left, the storage wall is used as a divider between a large kitchen and dining-family room. In the plan at right, the storage wall is installed in a non-bearing wall between the kitchen and dining areas. In this type of arrangement, the storage wall takes up very little extra room. (Figs. 16 and 17)

Drawings in this circular were made by Keith H. Hinchcliff, Professor of Agricultural Engineering.