

# Refuse-Can Holders

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Sanitary storage of refuse is a desirable goal for every community. It has been reported that the author of a well-known guide to fine eating places will not enter a restaurant until after he has inspected and approved its refuse-storage facilities and practices. Likewise, the desirability of a community or a neighborhood may be measured, not by its front lawns, but by its back yards. The refuse-can holder, rack, or stand is a recently developed device which aids materially in maintaining sanitary refuse-storage conditions.

## Refuse Sanitation Problems

Many elements of the community agree on the importance of promoting and maintaining a sound, community-wide, refuse-storage policy and practice. Public health authorities acknowledge the significance of refuse sanitation by initiating periodic clean-up campaigns and by issuing and enforcing regulations governing the storage of refuse awaiting collection. Public works authorities are interested in having refuse confined in proper containers and located at the proper places for collection. The fire department, too, has a legitimate concern in the safe storage and collection of combustible refuse.

Most communities have regulations requiring garbage and other refuse to be placed in water-

tight metal containers—5- to 10-gallon containers for garbage and 20- to 24-gallon containers for rubbish, or 30-gallon containers where combined storage is permitted. Such regulations, however, do not solve the problems that arise from the tipping over of containers or the investigation of their contents by dogs or children. Likewise, the problems of deterioration of cans by rust and of accumulations of rotting refuse under cans resting on the ground have seldom been resolved by the existing regulations. The use of refuse-can holders or stands is proving a satisfactory answer to these problems in several communities.

## Past Experience

Some years ago, the concrete platform was promoted by authorities to eliminate the problems of rust and unsanitary conditions where cans rest on the ground (1). However, rodents burrowed underneath these platforms, which provided them with excellent harborage conveniently located near a supply of food. The construction of a 2-foot curtain wall below and around the platform will eliminate this disadvantage, but home owners are likely to balk at the added expense. A container platform with the curtain wall can probably be used to best advantage in multiple-dwelling projects and business areas, where it may be constructed large enough to hold several containers.

Underground, vaultlike structures have also been tried. These structures consist of a cylinder into which the refuse can is lowered and a cover which fits over the cylinder, flush with the ground. The disadvantages of the vaults, however, often outweigh the advantages, espe-

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cially where the ground water is high. Sunk-en cans, therefore, are recommended only where soil drainage is especially suitable or direct drainage is provided.

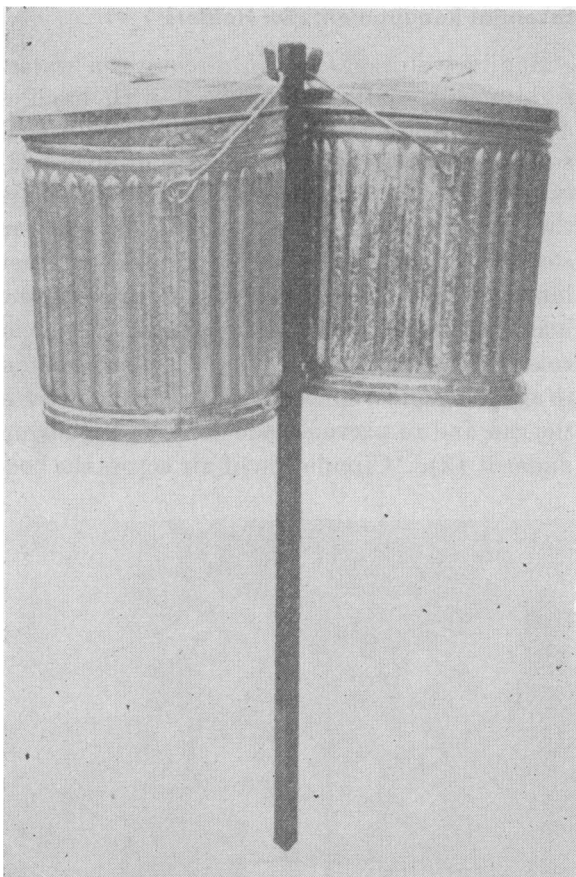
Frame or boxlike enclosures have long been used to conceal and protect refuse cans and, occasionally, loose refuse. Experience has shown that such structures generally attract rodents and flies because they are difficult to keep clean. Furthermore, people are inclined to use them as substitutes for an adequate number of good quality cans. The best devices for hiding and protecting refuse containers do not result in sanitary conditions, unless, of course, they are adequately maintained.

### Essential Requirements for Holders

Sanitary storage of refuse requires a water-tight metal container equipped with handles and a tight-fitting cover. Without additional safeguards, however, the benefits of such containers may be minimized. Refuse containers that are kept out of doors should be kept on some type of holder. A good refuse-container holder is one that is convenient for both the householder and the collection crew. It should raise the can at least 12 inches from the ground to allow adequate space for cleaning underneath the can and to prevent rodents from harboring under it (2). Circulation of air across the bot-



Figure 1. Refuse cans held on steel hooks.



**Figure 2. Refuse-can holder consisting of steel post and hooks.**

tom of the can keeps it dry and helps to prevent corrosion. The holder should provide support of the can to prevent its being tipped over by dogs or children. Finally, it should be made of a durable material, one that is not subject to excessive deterioration as a result of varying types of climatic conditions.

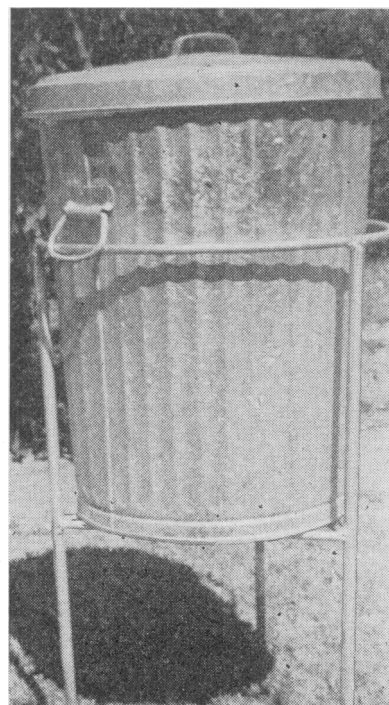
### **Recommended Holders**

There are several types of commercial stands and holders which meet these requirements. One of the simplest is a steel hook that can be fastened to the house or to a fence post (fig. 1). Another type comes complete with a steel post, hooks, and sometimes a chain for the can cover (fig. 2). The post need only be set in the ground in a convenient place to be ready for use. Some housing developments are providing such container racks as standard equip-

ment for the tenants. The neat rows of refuse containers and the cleanliness of the community are results that are immediately noticed.

A more substantial stand, which has been used in some communities, is constructed of pipe and pipe fittings. Once the pipe is cut and threaded, it can easily be assembled by the householder. Lengths of pipe or reinforcing steel may also be welded together to make a stand (figs. 3 and 4). Because these stands are made of metal and have rigid joints, they can be considered permanent.

Though somewhat less durable, stands constructed of lumber are also being widely used. Some health departments have distributed plans to make it easy for the householder to construct these stands at home. The Public Health Service has also suggested such a stand. In figure 5 are a list of materials and diagrams for its construction. This stand is designed to hold a standard container of 30-gallon capacity; where cans of smaller capacity are used, the dimensions should be made smaller so that the can will be held securely in place. The recently completed film by the Public Health Service,



*Courtesy Oklahoma State Department of Health.*

**Figure 3. One-can stand made of reinforcing steel welded together.**

"Sanitary Storage and Collection of Refuse," portrays the use and advantages of this type of stand (see p. 787, this issue of *Public Health Reports*).

### Promoting Community Programs

The first step in stimulating community interest in refuse sanitation is the dissemination of information regarding the hazards of insanitary conditions. Citizens should be informed of the danger of diseases borne by flies, rats, and other pests that breed or find harborage in improperly stored garbage and rubbish (3). Broken glass, tin cans, and bottles (sometimes containing residual poisons or unwanted medicines) constitute serious accident hazards. Wood, rags, paper, and other combustible rubbish are fire hazards. Obnoxious sights and odors can depreciate property values. Hidden costs of improper refuse storage include higher medical and hospital bills, higher insurance rates, and higher taxes.

Specific campaigns, of course, will depend largely upon the community involved—its economic status, its percentage of home owners, and the educational level of its citizens. Municipal authorities should not find it too difficult, however, to enlist the aid of the many diverse elements of the community which are directly or indirectly concerned with the problem.

Local public information media, such as community newspapers and radio stations, can be urged to contribute space and time as a public service. Civic organizations (Rotary, Kiwanis, Lions), business organizations (chambers of commerce, boards of trade, neighborhood associations), women's organizations, parent-teacher associations, garden clubs, professional associations (especially those related to medicine), and many others can be shown to have a personal interest.

The Public Health Service has published a leaflet (Public Health Service Publication No. 183) which contains recommendations concerning the proper storage of refuse by the householder. This leaflet could be distributed throughout a community as an aid in promoting good practice. The leaflet, entitled "Safe and Sanitary Home Refuse Storage," can be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for \$1 per 100 copies. The Public Health Service film mentioned above will also be found useful in community programs for promoting refuse sanitation.

### Current Programs

That campaigns for sanitary refuse-can holders can be successful is attested by such communities as Watertown, S. Dak., where it

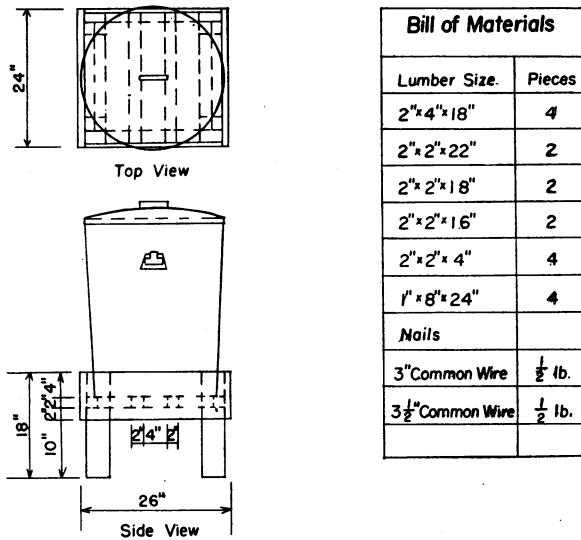


*Courtesy Oklahoma State Department of Health*

**Figure 4. Multiple-can stand made of pipe with welded joints.**

is reported that half of the population of 18,000 now have them. In Cleveland, Ohio, the city health department assembles holders from welded reinforcing steel and sells them to householders at a very reasonable price. Waynesboro, Va., has successfully encouraged the use of pipestand holders on a community-wide basis.

#### ONE CAN GARBAGE STAND



**Figure 5. Diagrams and materials for construction of wooden stand to hold 30-gallon refuse can.**

In Rapid City, S. Dak., a citizen placed a refuse-can holder on his front lawn to demonstrate its desirable qualities; as a result, many others in the city began using holders. Mandan, N. Dak., encourages the use of stands as part of its refuse sanitation program, which was initiated in conjunction with the recently

completed city-State-Public Health Service demonstration of a sanitary landfill. The Oklahoma State Department of Health is also promoting the use of refuse-can racks throughout the State (4).

In many instances, the acceptance of the principles of refuse-can racks or holders by the residents of a community has led swiftly to a general improvement in sanitation practices in other respects.

#### Summary

The use of refuse-can holders appears to be the best answer thus far to the problem of protecting the cans from excessive rust, from being tampered with by children, and from invasion by pets or vermin. Since refuse-can holders keep the cans off the ground with sufficient clearance for good housekeeping of the area, the accumulation of rotting refuse rarely occurs. The orderliness developed by the use of holders in turn helps to beautify the surroundings.

#### REFERENCES

- (1) Federal Public Housing Administration: Sanitary services and practices for low rent housing developments. Washington, D. C., U. S. Government Printing Office, 1943. Bulletin 1, pp. 15-22.
- (2) Coffey, J. H., and Dunn, W. L.: How to make refuse collection sanitary. American City 77: 90-91 (Jan., 1952).
- (3) U. S. Public Health Service, Communicable Disease Center: Rat-borne disease prevention and control. Washington, D. C., U. S. Government Printing Office, 1949, pp. 93-100.
- (4) Wilcomb, Maxwell J., Jr.: Proper refuse handling is important to community rat and fly control. Oklahoma Health Bull. 10: 19-20 (1952).

