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RECEPTACLE RETAINING DEVICES

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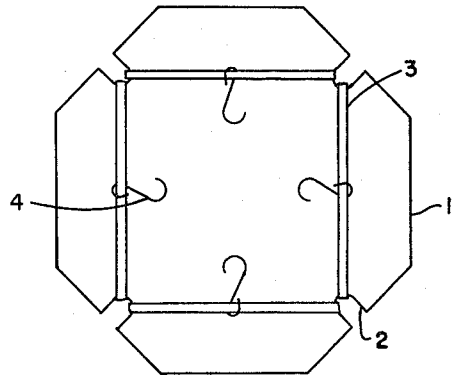


FIG 1

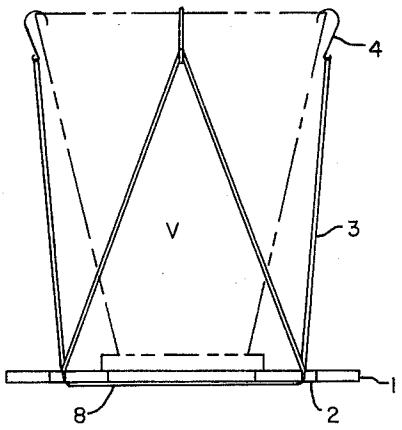


FIG 2

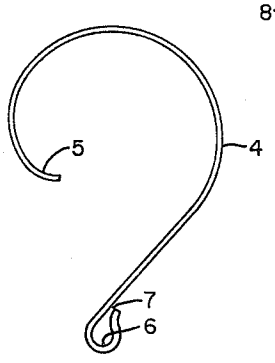


FIG 3

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RECEPTACLE RETAINING DEVICES

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5 Claims. (Cl. 248—154)

This invention relates to a receptacle retaining device and has as its primary object the furnishing of an enlarged base for receptacles which have very high centers of gravity and are therefore difficult to transport without tipping over. An example of this use is in the transportation of vases and pots filled with flowers. It is the present practice to use square boxes of foamed plastic or similar material wedged with newspapers to hold the vases filled with flowers together during transportation by truck. This is an entirely unsatisfactory procedure as the load will shift, destroying flower arrangements and spilling water during travel with the bumping and the starting and stopping of the truck. Previous attempts to solve this problem by using a base or platform to which the vase of flowers is mounted have not proven satisfactory. The previous structures have been too expensive and cumbersome to manufacture or satisfactory for only one size and shape of vase or container. It is, therefore, an object of this invention to provide a universal receptacle retaining device which is economical to manufacture.

It is another object of this invention to provide a receptacle retaining device which will serve satisfactorily for the average vase or receptacle regardless of the configuration of the lip of the receptacle.

It is another object of this invention to provide a receptacle retaining device which will serve satisfactorily for the average vase or receptacle regardless of the height of the receptacle.

It is a further object to provide a device of character described that can be easily repaired by inexpensive replacement parts.

Another object of the instant invention is to provide an economical receptacle retaining device having a base and four hook or receptacle engaging elements mounted thereto by elastic elements.

On the drawings:

FIGURE 1 is a top view of the receptacle retaining device constructed according to the teachings of the present invention while it is not in use.

FIGURE 2 is a view in elevation of the receptacle retaining device constructed according to the present invention showing the receptacle retaining device securing a phantom vase in the upright position.

FIGURE 3 is a side elevation of the receptacle engaging element.

Referring to the drawings in detail wherein reference characters designate corresponding parts throughout the several views.

FIGURE 1 shows the receptacle retaining device in the plan view. The base element identified by numeral 1 in the preferred embodiment, and which is in this instance octagonal in shape. This base 1 may be constructed of corrugated paper board for the advantages gained by the high strength to weight ratio and resistance to bending while in use. It would be possible, however, for other construction materials to be used in place of the corrugated board for special uses or environments. For most purposes the corrugated board with a waterproofing material coated thereon has been found satisfactory. The use of some other material however would not depart from the spirit of the invention.

Base 1 in the preferred embodiment is octagonal in shape and has slot structures 2 disposed on alternating sides thereof. The slots 2 begin on the outer edge of the base 1 and extend toward the center of the base. One skilled in the art may change the particular shape of the base structure to meet his unique need and environment. The primary limitation as to the external design of the base is that the base must be shaped so the slot structures 2 can be disposed in the rectangular relationship to each other.

The elastic elements 3 are mounted on base 1 by being threaded through adjacent slot structure 2. In the preferred embodiment the elastic elements are manufactured of rubber or rubber substitutes having a high modulus of elasticity. It has been found to be effective to have four separate elastic elements circular in shape. These circular elastic elements can then be inserted in adjacent slot 2 until all are mounted as shown in FIGURE 1. The elastic elements should make a rectangular pattern and preferably make a square pattern on the base 1. This design of the elastic elements on the base 1 has two purposes. First with a rectangular pattern opposite receptacle engaging elements 4 have equal pull on the receptacle held by the instant invention. This aids in keeping the receptacle from slipping from the center of the base and thus unbalancing the structure. It can be seen that when each of the four receptacle engaging devices have equal tension on them, the receptacle holding device with the receptacle mounted therein as seen in FIGURE 2, make a fairly rigid and stable structure.

FIGURE 2 shows our receptacle retaining device with a phantom vase V mounted thereon. This figure shows the elastic elements 3 in extended or stretched position. In this position the elastic elements 3 are exerting equal pressure on opposite sides of the retained vase to prevent tipping. Further elastic elements 3 extending between adjacent slots 2 pass under base 1 and form a cushion and anti-skid device 8 for the structure. This anti-skid feature becomes important when the receptacle retaining device is used to carry vases of flowers in the rear of florist trucks. The vases, if merely placed in the rear of the truck, will move with inertia as the truck starts and stops and since they are top heavy when filled with flowers they will tip over spilling water and destroying arrangements. When our device is used, the underportion of the elastic elements 8 serve to give a gripping hold to the truck bed across a broad surface to prevent the flower arrangements from tipping over or sliding around. This is true even if the bed of the florist truck should be wet.

FIGURE 3 shows detail of the receptacle engaging device 4. This element may be constructed of various materials such as metal wire or plastic. It will be noted that the receptacle retaining structure is generally hook-like in design so that it can securely hold the receptacle lip. The tip 5 of the element 4 is of a shorter of tighter radius than the main body of the device. Unexpectedly we have found that this tightening of the radius enables the receptacle engaging means to hold the many various lip or edge structures which are found on flower pots, vases and receptacles generally more securely than the receptacle engaging structures of the prior art.

The receptacle engaging device 4 has an eyelet 6 formed by the upwardly disposed terminal portion 7. The terminal portion should be formed so that eyelet 6 is large enough to allow the receptacle engaging means 4 to slide lengthwise of the elastic member 3 to equalize stress and achieve proper centering on receptacles of different heights, diameter and mouth shapes. Sufficient clearance should be allowed between terminal end 7 and the main portion of engaging means 4 to allow the elastic means 3 to be inserted and withdrawn. It should not, however, be so large that the engaging means 4 could fall off the elastic means.

It will, of course, be understood that various details of construction may be modified without departing from the spirit of the invention herein described. It is, therefore, not our purpose to limit the patent granted hereon except as limited by the scope of the claims hereinafter set forth.

We claim as our invention:

1. A receptacle retaining device comprising a base member having a plurality of slots therein extending from the edge inwardly, a plurality of receptacle engaging elements attached to the base by elastic tensioning means, said elastic tensioning means being mounted on the said base by being inserted in adjacent slots.

2. The structure of claim 1 wherein the receptacle engaging elements are hook-like in design and have a shorter radius of curvature at the tip end thereof than in the main body and being adapted to fit over any shaped lip.

3. The structure of claim 1 wherein the tensioning means are so inserted between adjacent slots in the base so as to pass beneath the base member forming a cushion and anti-skid means.

4. The structure of claim 2 wherein the tensioning means are so inserted between the adjacent slots in the base so as to pass beneath the base member forming a cushion and anti-skid means.

5. The structure of claim 4 wherein there are four receptacle engaging elements.

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