The present invention relates to a method of and ring for packaging and has to do more particularly with packaging a plurality of articles in superposed or stacked relation, for shipment of such articles in interplant or interdepartmental transit without crates, cases or the like, so that such articles may be delivered for use without injury, and at a minimum cost for packaging.

The invention will be described herein as having to do with the packaging of tubs used in the manufacture of washing machines although it is to be understood that the invention is susceptible of use with other articles of merchandise than tubs.

In interplant and interdepartmental shipments, it has been found that the cost of packaging is prohibitive where the articles or bodies of merchandise are individually crated or cased. Where such articles are finished ready for use, it is essential that articles be protected in shipment so as not to be damaged in transit. This is especially true of interdepartmental transit or shipment of articles moved about from place to place for assembly in finished form.

It has been discovered that the handiest and most economical manner to ship such items or articles is by nesting them in stacks or in superposed relation and packing several stacks closely together. However, unless some means be taken to prevent damage or marring of the several items so stacked, there is a likelihood that such articles might be injured to an extent where refinishing becomes necessary, consequently, slowing production and increasing the cost of manufacture.

The present invention has for an object the method of packing articles of merchandise, such as tubs and the like in stacked formation, protecting the articles or bodies in a stack from contact one with another and also from adjacent stacks.

Another object of the present invention is to provide cushion rings adapted to be interposed between adjacent bodies in superposed relationship for supporting such bodies in nested or superposed relationship and out of contact one with another.

Another object of the present invention is to provide means for supporting a plurality of bodies in stacked and nested formation, with the several bodies or articles out of bodily contact one with another, which means are temporarily applied to the bodies and which means are capable of reuse time after time.

A still further object of the present invention is to provide a cushioning ring which may be readily applied to an article for supporting another article in superposed relationship and so engaging the articles in such relationship as to prevent displacement of the same during shipment.

A still further object of the present invention is to provide cushioning means applicable between superposed articles for maintaining such articles in superposed position and out of bodily contact one with another and also to prevent contact between adjacent stacks of such superposed articles.

The above, other and further objects of the present invention will be apparent from the following description, accompanying drawing and appended claims.

The accompanying drawing illustrates an embodiment of the present invention and also illustrates the manner of practicing the method of the present invention, and the views thereof are as follows:

Figure 1 is an elevational view of fragmental portions of two adjacent stacks of articles packaged in accordance with the principles of the present invention.

Figure 2 is a plan view of the novel ring of the present invention.

Figure 3 is an enlarged, fragmental, vertical sectional view showing portions of two bodies stacked and packaged in accordance with the principles of the present invention.

Figure 4 is a fragmental longitudinal sectional view through portions of two stacked or superposed bodies or articles and showing a section of the cushion ring different from that illustrated in Figure 3.

The drawing will now be explained:

The chosen exemplification of the present invention is made in connection with tubs used for washing machines, the tubs being pressed into desired form and shape and illustrated as having a closed bottom and an open top formed by a rolled-over margin constituting a chime.

In order to economically transport such bodies in interplant and interdepartmental transit, these bodies are arranged in stacks or superposed relation as illustrated in Figure 1.

Figure 1 illustrates two stacks A and B with the bodies or articles of different height.

For convenience in description, let it be assumed that the bodies or articles in the stacks A and B are constructed similarly to the ones illustrated in Figure 3 and as heretofore described.

The articles or tubs have the bottoms thereof provided with an annular reinforcing rib which
rib serves as the lower extremity of the tub when it is resting on a support or floor.

Adjacent the upper or open end of a body, the material thereof is fabricated to provide an internally extending reinforcing rib 4, adjacent the chime 2 for rigidifying the open end of the body.

The cushion ring of the present invention is made preferably of rubber or rubber composition so as to have the characteristics of resiliency and elasticity and at the same time to be so made as to enable its manufacture at comparatively low cost.

The ring C as herein illustrated is adapted to coat with the forms of articles described and as illustrated comprises a lower flange 8 having its outer face shaped to conform to the upper open margin of the body, a peripheral bead 6 which is open at its end as at 7, and an upstanding flange 9. The inner surface of the ring is shaped to conform to the lower periphery of a body or article so as to snugly receive such body when arranged in superposed relationship as illustrated. In order to properly seat such superposed article, the ring is provided with seat means, such as beads 6, which are integral with the ring which serve to rigidify the flange 8 and at the same time made to engage the periphery of the superposed body with respect to the ring. The upstanding flange 9 of the ring receives the periphery of the lower end of the superposed body and cooperates with the beads 6 to support such body.

The lowermost body or article D when a series of such bodies is stacked, is provided with one of the rings C, as illustrated in Figures 1 and 3 and the lower flange 8 of such ring C serves to cushion the stack on a truck or floor, by maintaining the annular reinforcing rib 3 out of contact with the supporting surface.

In assembling a stack of such articles or bodies, the lowermost article D is seated in a ring C which ring is placed on a floor or truck and atop such lowermost article is applied another ring with the bead 6 filling over the chime 2 of such lowermost article. Then another article E is seated in the second ring C and the stack continued as high as desirable under the circumstances.

The formation of the ring C interferes with the nested or stacked adjacent articles and retains the articles in stacked formation so that no additional means are needed. The interfitting of the beads 6 over the chime 2 prevents displacement of the superposed articles from the lowermost articles of a stack.

The provision of the packaging strip C between adjacent articles arranged in stack formation maintains such articles out of bodily contact one with another and at the same time maintains such articles in superposed relationship.

In loading a truck or car with a plurality of stacks, the adjacent stacks may be placed closely together as is permitted by the beads 6 of the various packaging rings C.

Figure 1 illustrates two adjacent stacks with the beads 6 of the bottommost rings in contact. However, in this figure, the articles of the stack B are of less height than articles of the stack A so that the packaging rings C of the stack B appear as staggered with respect to the packaging rings C of the stack A. The beads 6, nevertheless, serve as cushioning bumpers to prevent direct contact between the stacked articles should there be any lateral displacement thereof due to swaying or the like.

Figure 4 illustrates a fragmental portion of two superposed articles maintained in such relationship by a packing ring C of the present invention. Here the section is taken through the ring between adjacent lugs 9. This figure illustrates the manner in which the lugs 9 seat the periphery of a superposed body or article.

Instead of making the ring C with a plurality of spaced lugs 9, these might be incorporated as a single rib, however, it is more economical to make the ring with the lugs 9 at intervals in the inner periphery of the ring rather than as a single continuous rib.

The present invention is very useful in stacking for shipment tubs or like articles which have porcelaine, enamel, or other brittle coverings as such articles are fully protected against damage in transit by the means and method of this invention.

While the cushion means or ring has been described as of resilient characteristics, it of course, could be made of other suitable material such as wood, cardboard or the like.

Furthermore, the cushion means of this invention might be constructed to comprise two rings instead of one, for accomplishing the purpose of this invention.

While the invention has been described here in more or less precisely as to details, it is not to be limited thereby, as changes may be made in the arrangement and proportions of parts, and equivalents may be substituted, without departing from the spirit and scope of the invention.

I claim as my invention:

1. For interposition between stacked bodies to hold the same in stacked relation, a ring of pliable elastic material, said ring comprising a centralized core section, inner and outer concentric flanges extending downwardly from said core section and in spaced relation to receive therebetween the top peripheral margin of one of such bodies, a flange extending upwardly from said core section to receive the lower peripheral section of a superimposed body, and a series of lugs projecting inwardly of said ring from the inner of said concentric flanges, said lugs being adapted to engage and support the superimposed body.

2. A pliable elastic packing ring comprising a centralized core section, inner and outer concentric flanges extending downwardly from said core section and in spaced relation to receive therebetween the top peripheral margin of a body to be stacked, a flange extending upwardly from said core section to receive the lower peripheral section of a superimposed body, and means projecting inwardly of said ring from the inner of said concentric flanges, said means being adapted to engage and support the superimposed body.

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