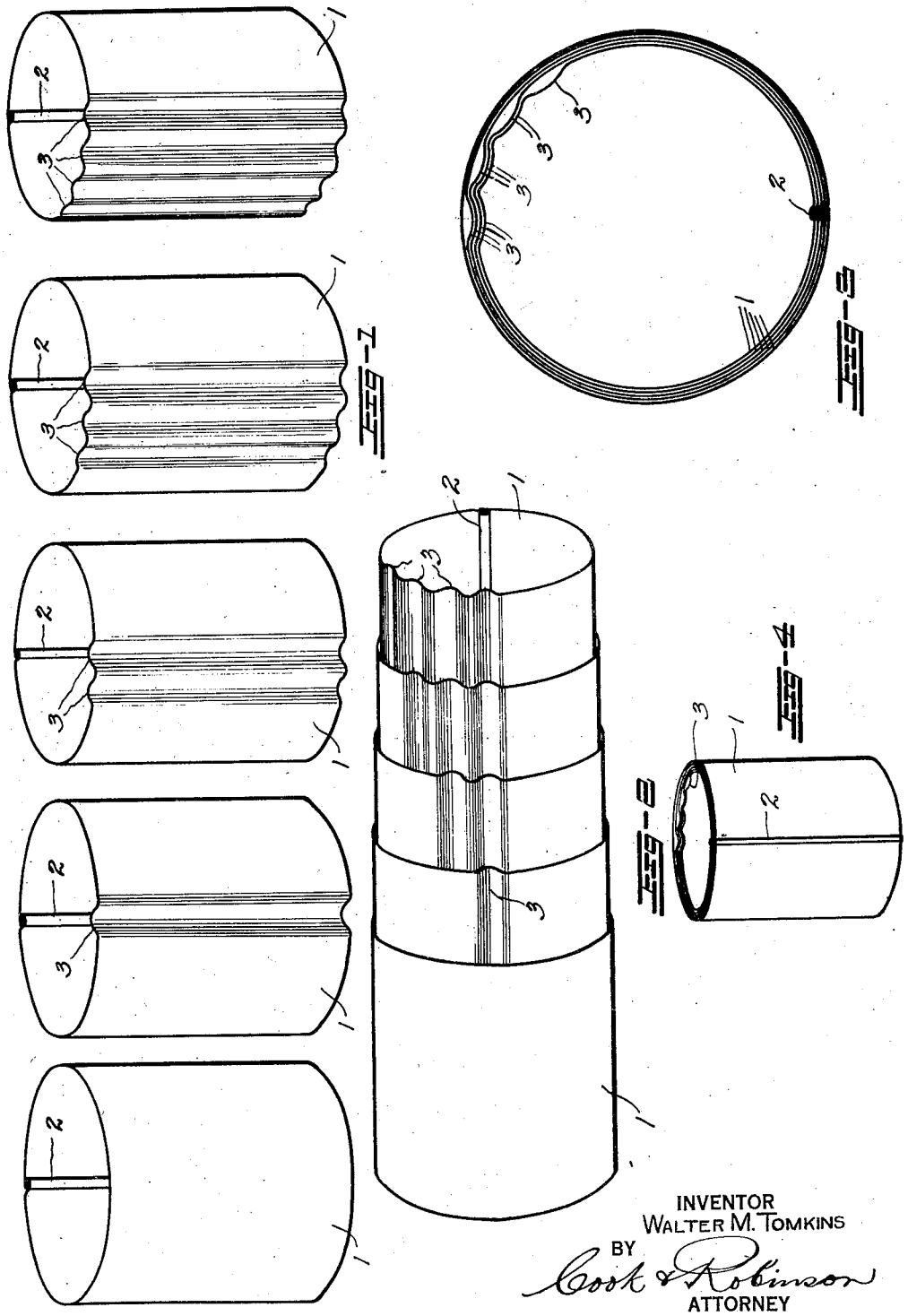
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NESTED CAN BODY AND METHOD THEREFOR

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INVENTOR
WALTER M. TOMKINS
BY
Cook & Robinson
ATTORNEY

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WALTER M. TOMKINS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO CONTINENTAL CAN COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

NESTED-CAN BODY AND METHOD THEREFOR

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This invention relates to can body packs, and more particularly to the deforming and nesting can bodies of the ordinary, cylindrical type so that a plurality of bodies, originally of the same size and capable of being reformed, may be nested one within the other for the purpose of decreasing the space otherwise required for shipment or storage.

It is the purpose of this invention to provide a way of overcoming the great expense of shipping can bodies in their original cylindrical form; it being apparent that in their original form they require considerably more space for storage than the actual volume of the bodies, and since freight rates are governed by space required as well as by weight, this item is important.

The present invention contemplates the provision of a pack of nested can bodies wherein all of the bodies, except that which encloses the pack, are so deformed that they may be fitted one within the other and all contained entirely within the outer body so that the entire pack requires no more space for storage than is taken up by the enclosing body. Heretofore, can bodies have been nested together by similarly bending the bodies so as to taper them in such manner that they may be fitted telescopically one within another, and while this method is satisfactory to a certain degree, there are some undesirable features which are eliminated by the present invention; one of the undesirable features being that the tapered bodies become so tightly wedged together, due to jar and vibration during shipment, that it is quite difficult to separate them, necessitating that each body be handled separately in removing it from the pack. Another feature that is not entirely satisfactory is that since the tapered bodies do not entirely telescope together, the pack requires more space than do packs assembled according to the present method. Another undesirable feature is that packs wherein the can bodies are tapered and telescopically fitted together separation of the bodies by passing the pack along a horn as is contemplated in the present invention is not possible.

In view of the above, it has been the object of this invention to provide a can body pack that takes up less space than packs as heretofore made, and wherein the several bodies are so deformed and assembled together that an easier and quicker separation is possible.

More specifically, the present invention resides in the formation of a can pack from bodies of the same size, by fluting lengthwise the bodies that are to be enclosed in such manner as to sufficiently decrease each one diametrically that they may be fitted one within another and all contained wholly within the outer body.

It is also an object of the invention to so locate the flutes in the several bodies that they will fit together in the pack and to provide each successive can, from the outside of the pack inwardly, with an additional flute which, by its formation, decreases the diameter of that body sufficiently to permit its disposition within the pack and which serves also as a means whereby the body may be dislodged from the pack when the latter is separated.

In accomplishing these and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view showing a plurality of can bodies, originally of the same size and shape, which have been fluted according to the present invention and are ready to be assembled together in nested relation.

Figure 2 is a perspective view, showing the relation of the bodies and the fluted portions thereof during assembly of the pack.

Figure 3 is a cross section of the bodies as nested in the pack.

Figure 4 is a perspective view of the assembled pack.

Referring more in detail to the drawings—

The can bodies to be nested together, each designated by reference numeral 1, are made from tin blanks bent into cylindrical form with their ends joined permanently together in a seam 2 that extends lengthwise of the body. The can body which is to enclose the pack of nested bodies is left in its original form, but the remaining bodies, which orig-

inally were the same size and shape as the enclosing can, are longitudinally fluted by forming inwardly pressed grooves 3 therein whereby the bodies are reduced diametrically so that they may be fitted one within another and all the fluted bodies contained entirely within the enclosing or outer body.

The preferred manner of fluting the bodies is best shown in Figure 3, which shows them, beginning with the body next within the one which encloses the pack, each to be formed with one more flute than is provided in the body within which it is fitted, that is, the second body has one flute, the third has two flutes, the fourth has three flutes, and so on to the innermost body; the extra, or added, flutes serving to progressively decrease the diameters of the bodies so that they may be easily nested within the body enclosing the pack. The fluted portions of the bodies, preferably, are located opposite the seams and when the several bodies are nested together, the fluted portions are so fitted together that the flutes added successively to the bodies of the pack from the outside inwardly follow each other in a circumferential direction, thereby affording an arrangement suitable for separation of the pack by passing it over a special type of horn for this purpose on or adjacent which pins are disposed to engage with the ends of the successive flutes as the pack is advanced along the horn.

It is readily apparent that by so fluting the successive bodies of the pack, their diameters may be so decreased that they may be nested one within another and all contained entirely within the outer or enclosing body. It is also apparent that various mechanical devices may be used for fluting and assembling the cans in the pack, and that various means may be devised whereby the pack may be easily and quickly separated.

While I have shown the present pack to consist of five nested bodies, it is not intended that it be limited to this number; it being readily apparent that it may comprise various numbers depending upon the extent to which the bodies may be reduced in diameter by the fluting process without damage thereto and also on the original size of the bodies.

By so fluting the bodies, they may be located entirely within the inclosing body to provide a pack that is no larger than the enclosing body itself, thereby gaining an advantage over the type of pack wherein the bodies are only partly telescoped together. Furthermore, this arrangement avoids any difficulty of separating the pack, due to a wedging action, as is encountered with the tapered bodies, for the reason that the bodies when deformed are the same diameter throughout their lengths and the flutes and seams in the bodies hold them slightly apart in the pack.

It is intended that when packs of can bodies of this type reach their point of use, they may be separated and the bodies then reformed into their original cylindrical shape by passing them through any suitable machine provided for this purpose and then the can ends applied thereto in the same manner as is usually done.

Having thus described my invention, what I claim as new therein and desire to secure by Letters-Patent, is:

1. A pack of the character described, comprising a plurality of deformed can bodies fitted one within another and contained entirely within the outer body.

2. A pack of the character described, comprising a plurality of deformed can bodies fitted one within another and contained entirely within the outer body, said bodies being originally of the same size and shape and adapted to be separated from the pack and reformed to that original shape.

3. A pack of the character described, comprising a plurality of can bodies, originally of the same size and shape, one of said bodies being in its original form and enclosing the others which are so deformed as to be progressively decreased diametrically and fitted one within another and all wholly contained within the enclosing body.

4. A pack of the character described, comprising a plurality of can bodies, originally of the same size and shape, fitted one within another and contained entirely within the outer body; said outer body being in its original form and said enclosed bodies being deformed by longitudinally extending flutes adapted, after separation of the pack, to be reformed to restore the bodies to their original form.

5. A pack of the character described, comprising a plurality of cylindrical bodies, originally of the same size and shape, fitted one within another and contained wholly within the outer body; said outer body being in its original form and said inner bodies being fluted longitudinally, each of the bodies from the outer side of the pack inwardly being formed with progressive numbers of flutes whereby the diameters are progressively decreased; said bodies being separable from each other from either end of the pack and adapted to be reformed to original shape.

6. A pack as in claim 5, wherein the fluted portions of the several bodies are nested together, with the additional flutes of the several bodies from the outer side of the pack successively following each other.

7. The method of nesting can bodies, which consists of deforming the bodies to decrease them diametrically and fitting them one within another and entirely within the enclosing body.

8. The method of nesting a plurality of can bodies, which consists of deforming the bod-

ies by longitudinal flutings whereby they are diametrically decreased, and then fitting them coaxially one within another.

9. A method of nesting cylindrical can bodies which consists of deforming bodies of the same size and shape by pressing longitudinally extending flutes therein in progressive numbers to thereby progressively diminish the bodies diametrically, then fitting the bodies one within another so that they are contained entirely within the outer body.

10. A method of nesting cylindrical can bodies, which consists of deforming bodies of the same size and shape by pressing longitudinally extending flutes therein in progressive numbers to thereby progressively diminish the cans diametrically but leaving each deformed body of uniform diameter throughout its length, then fitting the bodies one within another with the fluted portions in nested relation.

Signed at Seattle, Washington, this 14th day of September, 1928.

WALTER M. TOMKINS.