June 3, 1947. H. G. DONNELLY 2,421,687

PORTABLE CONTAINER HANDLE STRUCTURE

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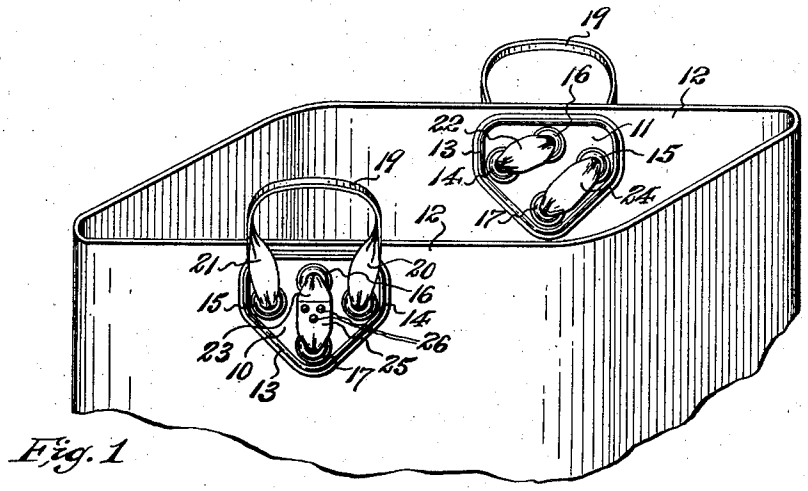


Fig. 1

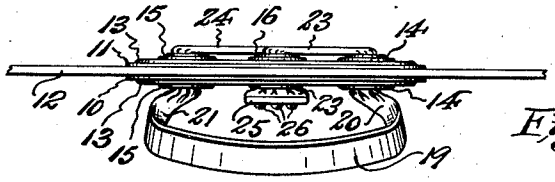


Fig. 2

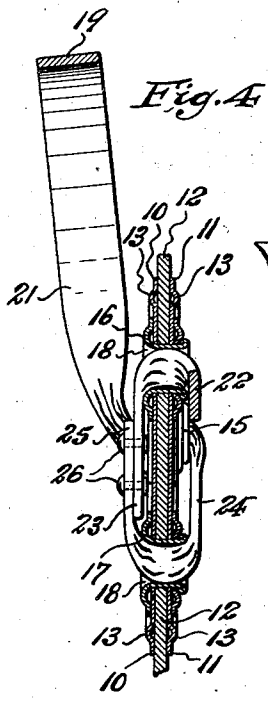


Fig. 4

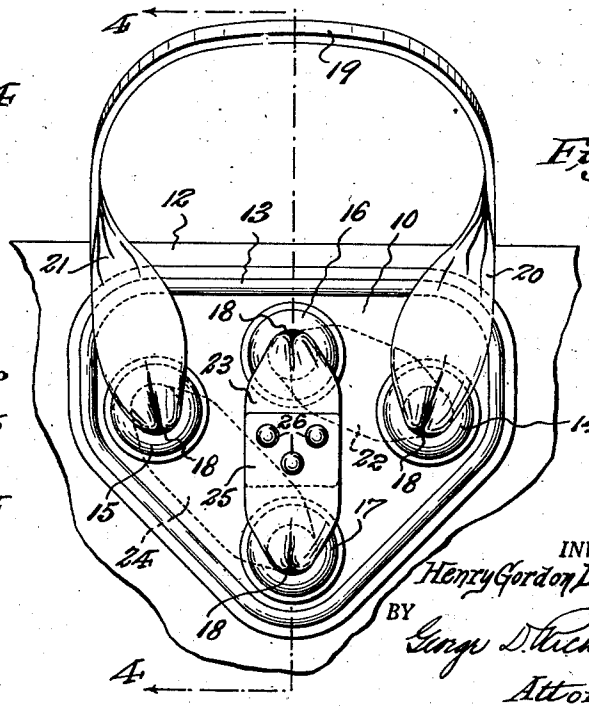


Fig. 3

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PORTABLE CONTAINER HANDLE STRUCTURE

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1 Claim. (Cl. 150—12)

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This invention relates to improvements in handle structures for portable containers and the like; and the invention has reference, more particularly, to a novel combination of handle element and means for affixing or anchoring the same to a wall of a container desired to be equipped therewith.

The invention has for an object to provide a novel construction of handle means for attachment to the walls of bags, baskets, tractional containers, or the like, and especially for attachment to walls of bags or other containers made of canvas or other flexible material; any of which containers may be of frameless or of framed type.

The invention has for another object to provide a novel handle structure comprising perforated anchor plate means having grommets for securing the same to a container wall, said grommets being arranged in predetermined spaced relation one to another, and a flexible handle element arranged to provide a freely extending loop member, side sections of which are laced through said grommets in such manner as to space apart the loop member sides, and so that terminal portions of said loop member sides are brought together in lapped and secured relation contiguous to a face of the anchor plate means; all whereby to provide an exceedingly strong united relation of the handle structure to the container wall, and in such manner as to avoid application of tearing or rupturing strains or stresses to said wall.

Other objects of this invention, not at this time more particularly enumerated will be understood from the following detailed description of the same.

An illustrative embodiment of the novel handle structure according to this invention is shown in the accompanying drawings, in which—

Fig. 1 is a fragmentary perspective view of a container, such, e. g., as one of the frameless canvas bag type, opposite side walls of which are equipped with handle structures made according to this invention.

Fig. 2 is a fragmentary edge elevation of a container wall equipped with the novel handle structure, said view being drawn on an enlarged scale.

Fig. 3 is an external face view of a handle structure according to this invention as operatively assembled with and affixed to a wall of a container, this view being drawn on a further enlarged scale; and

Fig. 4 is a vertical longitudinal sectional view, taken on line 4—4 in Fig. 3.

Similar characters of reference are employed in the hereinabove described views, to indicate corresponding parts.

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The novel handle structure of this invention, in an illustrative embodiment thereof as shown in the drawings, comprises an external anchor plate 10 and an internal anchor plate 11, adapted to be respectively superposed upon the external and internal faces of a wall 12 of a container desired to be equipped therewith, and so as to register in opposed relation one to the other. Said anchor plates 10 and 11 may be made of any suitable and preferably rigid material, and are preferably made of sheet metal. Said anchor plates may be of any desired peripheral shape or design, and are preferably provided in and coincidental to the marginal portions thereof with stiffening rib means 13, whereby to reenforce the same against accidental bending or distortion. Each anchor plate is provided with a plurality of openings arranged in predetermined spaced relation one to another. Said openings are arranged in substantially right angularly related pairs; the openings of one pair thereof being disposed and spaced along a transverse or horizontal axis, and the openings of the other pair thereof being disposed and spaced along a central vertical axis intersecting said transverse or horizontal axis. The anchor plates 10 and 11 are secured one to the other and to the intermediate container wall 12 by grommets or metallic eyelets which extend through the anchor plate openings. These grommets comprise horizontally aligned and spaced grommets 14 and 15, and vertically aligned and spaced grommets 16 and 17. Each grommet provides a passage 18 extending through the anchor plates 10 and 11 and intermediate container wall 12 between the exterior and interior of the container.

The handle element of the structure may be made of any suitable flexible or pliable material. For example, said handle element may be made of fabricated canvas, leather or other flexible strip material, or it may be made of covered or uncovered cordage, rope or like material. The handle element is formed to provide a freely extending loop member 19 having side sections 20 and 21 terminating in initially free end portions. To connect the handle element in anchored relation to the anchor plate and container wall assembly, the end portion of the loop member side section 20 is passed through the passage 18 of the grommet 14 from one side to the other of the anchor plate and container wall assembly, preferably so as to extend from the exterior to the interior face of said assembly, being thence

extended over the internal anchor plate 11 from the grommet 14 to the grommet 16, thus forming a flat lying bight 22 contiguous to the internal anchor plate 11, being thence passed outwardly through the passage 18 of grommet 16 to provide an emergent terminal portion 23 exteriorly of the external anchor plate 10. In like manner, the end portion of the loop member side section 21 is passed inwardly through the passage 18 of the grommet 15, being thence extended over the internal anchor plate 11 from said grommet 15 to the grommet 17, thus forming a flat lying bight 24 contiguous to the internal anchor plate 11, being thence passed outwardly through the passage 18 of said grommet 17 to provide an emergent terminal portion 25 exteriorly of the external anchor plate 10, and opposed to the before mentioned terminal portion 23. Said terminal portion 25 is disposed in overlapping relation to said terminal portion 23, and the lapped portions thereof are united in joined or coupled relation by affixing therethrough suitable fastening means, such, e. g., as a plurality of rivets 26. The thus joined terminal portions 23—25 provide a flat lying bight contiguous to the external anchor plate 10.

By the described connected relation of the handle element to the anchor plate and container wall assembly, the handle loop member is disposed to extend freely from an exterior side of a wall of the container equipped therewith. It will be obvious, however, that if it is desired to have the handle loop member extend from an interior side of a container wall, the end portions of the handle loop member side sections may be interlaced with the anchor plate and container wall assembly in a manner the reverse of that above described.

It will be understood from the above description of the handle structure as made according to this invention, that the same provides a connection of handle loop member to a container wall as reenforced by the handle anchor plates which is exceedingly strong and durable; and one in which tearing away of the handle loop member side sections is powerfully resisted by the arrangement of bights of the handle element end portions which are in snubbed relation to the anchor plates and their grommets. Furthermore, since by reason of the novel laced connection of the handle element end portions through and between a plurality of spaced points within the area of the anchor plates, it will be obvious that handle pulling stresses and strains will be so divided and distributed that risk of transmitting tearing or rupturing strains or stresses to the container wall per se is substantially eliminated.

While in the embodiment of my invention as shown in the drawings and as hereinabove described, an anchor plate arrangement has been specified as comprising external and internal anchor plates, and although in most cases such arrangement will be desired, it will nevertheless be understood that in some cases a satisfactory structure may be provided by the use of but a single anchor plate optionally applied to face either the interior or exterior side of a container wall to be equipped therewith.

Having now described my invention, I claim:

A handle structure for portable containers and the like comprising an external anchor plate and an internal anchor plate respectively superposed upon exterior and interior faces of an interposed container wall in registered opposed relation one to the other, a plurality of spaced grommets for securing said anchor plates and container wall in assembled relation, said grommets comprising a pair of horizontally aligned laterally spaced grommets and a pair of intermediate vertically aligned and spaced grommets, a flexible handle element arranged to provide a freely extending loop member, the side sections of which terminate in end portions, one of said end portions being laced from the outer side inwardly through one of said first pair of grommets to pass thence to and outwardly through one of said second pair of grommets, and the other said end portion being laced from the outer side inwardly through the other of said first pair of grommets to pass thence to and outwardly through the other of said second pair of grommets, and terminal parts of said end portions respectively emergent from said second pair of grommets being joined and secured together, whereby to provide a succession of interconnected snubbed bights adapted to anchor said loop member to the anchor plate container wall assembly and so as to offset said loop member outwardly from the exterior side of the container wall.

HENRY GORDON DONNELLY.

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