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2,997,218

CONTAINER AND ATTACHABLE HANDLE THEREFOR

Filed Jan. 21, 1959

Fig. 1

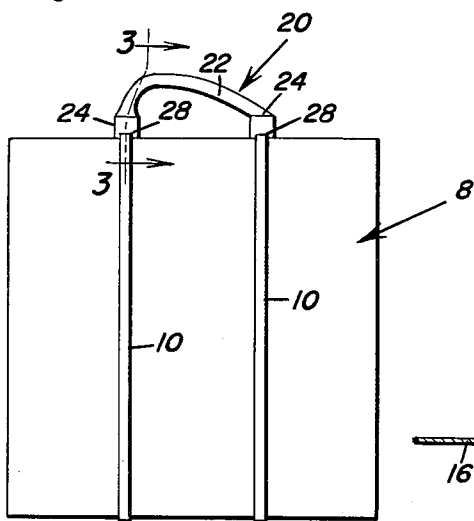


Fig. 3

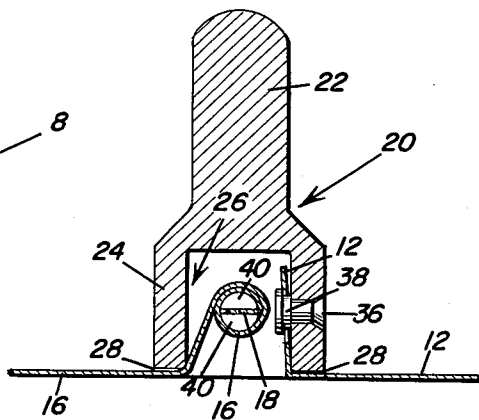


Fig. 2

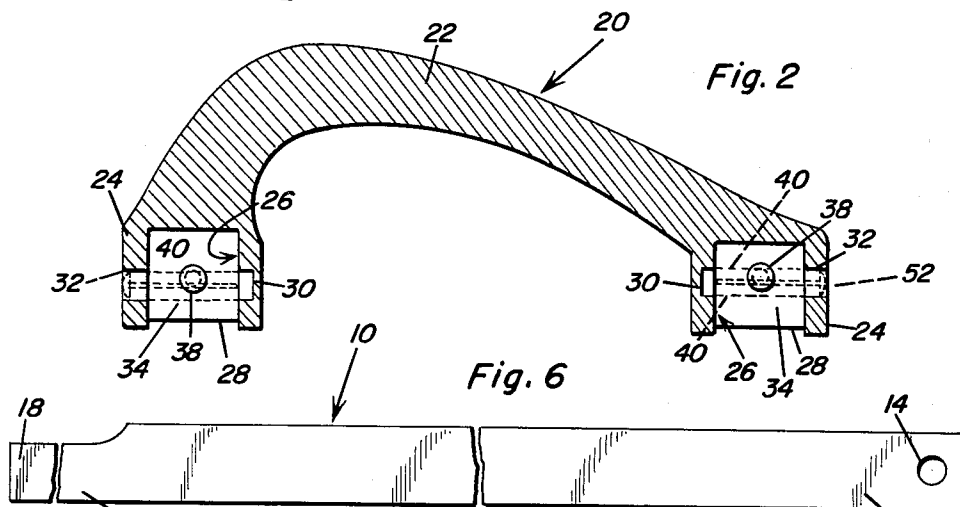


Fig. 6

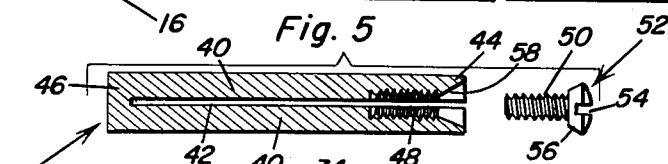


Fig. 5

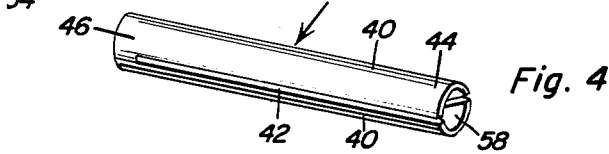


Fig. 4

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2,997,218 CONTAINER AND ATTACHABLE HANDLE THEREFOR

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This invention relates to means, broadly speaking, whereby a load such as a container, package, or the like, may be picked up and carried by way of a handle, that is, a structurally distinct and improved handle which may be readily and reliably applied and removed.

More specifically, the concept has to do with a container or equivalent means, a handle with a convenient hand-grip, and flexible straps or equivalent means which wrap-around and embrace the container and have end portions connected with the handle in a manner to detachably mount the handle for practical use on the container.

An object of the invention is to structurally, functionally and otherwise improve upon similarly constructed means wherein a handle is strapped on or correspondingly constructed means is tightly bound around the container in a manner to satisfactorily connect the handle with the container.

Briefly summarized, and considering the complete ready-to-use assembly there is provided a container, a handle having a hand-grip and at least one head with a surface thereof resting against a cooperating surface of said container, a strap embracing said container, one end of said strap being separably connected with said head, and slack take-up and tensioning means carried by said head, the other end of said strap releasably and adjustably connected to said tensioning means, whereby when said tensioning means is brought into play, said strap is bound tightly around the container and said handle is thus securely fastened to the container by way of the strap.

In carrying out the invention a handle is provided which has a U-shaped or similarly shaped hand-grip. Although it is within the purview of the invention to construct the handle to accommodate a single wrap-around strap the preferred embodiment is that shown and wherein specially constructed heads are provided at the respective ends of the hand-grip. Each head is constructed to permit cooperating end portions of the wrap-around strap to be releasably and adjustably connected therewith in the manner already touched upon. However, and by preference, each head is recessed in such a manner that a simple dowel or pin may be utilized as the strap end winding shaft. This pin is bifurcated to provide furcations and an intervening slot through which the terminal end of the cooperating end portion of the strap is threaded or keyed so that the adjacent portion may be wrapped around the pin in a generally well-known manner. A significant feature has to do with a screw-threaded bore or socket in one end of the pin and a tapering counterbore which opens through the end of the pin to accommodate a screw or an equivalent screw-threaded headed fastener. The peripheral portion of the head of the screw is properly tapered to cooperate with the counterbore to provide a novel friction lock in a manner to be hereinafter set forth.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying drawing.

In the drawing, wherein like numerals are employed to designate like parts throughout the views:

FIG. 1 is an elevation showing the combination, that is, the container, package or equivalent part, the flexible metal or equivalent straps wrapped therearound and connected with and attaching the handle to the container.

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FIG. 2 is view on a larger scale through the handle with the strap winding pin or shaft appearing in phantom lines, the straps being removed.

FIG. 3 is an exaggerated section taken on the irregular line 3-3 of FIG. 1, looking in the direction of the arrows.

FIG. 4 is a perspective view of the strap winding pin or shaft.

FIG. 5 is a sectional view of the same detailing the screw-threaded bore and tapering counterbore and also the headed screw, the latter appearing in elevation.

FIG. 6 is a plan view of one of the wrap-around straps with portions broken away.

With reference first to FIG. 1 the "load" is denoted by the numeral 8. The wrap-around strap is of flat sheet metal or equivalent construction and it is denoted by the numeral 10 and as seen in FIG. 6 it is provided at one end portion 12 with an attaching and anchoring hole 14. The other end portion 16 is preferably reduced in width to provide a coiling or winding tip portion 18.

The cast or equivalent handle is denoted as an entity by the numeral 20 and has a generally U-shaped or suitably arched hand-grip 22. As already mentioned it is not necessary so far as the concept is concerned to employ a pair of straps. Therefore, the handle would be constructed to accommodate one or two straps as required. In the showing, however, two straps are utilized and therefore both end portions of the handle are identical in construction. That is to say, each end of the handle terminates in a portion here referred to as a head 24. The head in turn is recessed to provide a pocket-line cavity 26. The cavity opens through what may be called the bottom of the head and it will be noticed that the head on diametrically opposite sides has clearance notches 28 to accommodate cooperating end portions of the strap as seen in FIG. 3. This construction is so that the head does not rest directly on the straps but directly on the wall or surface of the package or load 8. One wall of the pocket or cavity has a socket 30 which opens into the cavity and is aligned with a hole 32 through which the shaft-like reeling and winding pin 34 is passed. On the interior of the recess or cavity I provide an anchoring stud. This is to say, the stud is in effect a simple rivet 36 (FIG. 3) which has a headed end 38 located in the cavity and providing a neck. This headed neck serves to permit the apertured end portion 12 of the strap to be detachably connected thereto so that the strap can then be bent at right angles and passed through the clearance notch 28 from left to right as seen in FIG. 3.

Taking up now the winding and reeling member this comprises a shaft-like pin or dowel as already mentioned. As best shown in FIGS. 4 and 5, this pin is bifurcated to provide a pair of furcations 40 and an intervening slot 42. The slot opens through the right hand end portion 44 but terminates, of course, short of the solid left hand end portion 46. This end portion 46 is mounted for rotation in the socket 30. The slotted end portion is mounted for rotation in the bearing or opening 32. The aforementioned bore (FIG. 5) is, of course, provided at the right hand end portion of the winding pin and it is denoted at 48. It is screw-threaded to accommodate the screw-threaded shank 50 of the screw-threaded headed fastener or screw 52. The head is provided with the usual screw-driver slot or kerf 54 and the marginal or peripheral portion has a suitable bevel 56 to cooperate properly with the beveled peripheral surface of the tapering counterbore 58.

The invention is mounted and used in the manner best shown in FIG. 1. The strap ends or end portions 12 and 16 are attached to the recessed or pocketed head 24

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as illustrated in FIG. 3. Since each strap is wrapped around and used in the same way the description of one will suffice for both. To this end, it will be noted, therefore, that the hole or aperture 14 in the end portion 12 first has to be attached to the headed neck 38. Then, the strap is bent at right angles through the clearance notch 28 and is carried or wrapped around the package, container or load 8 so that the other end portion 16 is now available to be passed through the other clearance notch 28 and into the cavity or recess 26. The tip portion 18 is threaded through the slot 42 much in the manner that a film would be threaded on a winding spool. Then, the winding shaft 34 is operated by way of the screw 52 fitting into the socket 48. By turning the pin the end portion 18 wraps around the pin until it is reeled sufficiently tight to draw the wrap-around strap around the load. Manifestly, as the tension of the windings increase during the tightening of the strap the furcations 40 squeeze together. During the final tightening or winding steps and when the turning of the screw serves to drive said screw "home," the beveled surface 56 binds against the conical or tapering surface 58 with the result that the end portions of the furcations now spread apart and frictionally bind in the bearing hole 32. This action results in friction-locking the pin on the head 24 with the result that the handle is now firmly attached to the container or other load 8 in an obvious manner.

As is evident, the idea of a handle similar to that herein revealed with heads at the ends to accommodate load embracing straps or bands is disclosed as old, generally speaking, in a patent to Reynolds 412,295, of October 8, 1889. It is evident, therefore, that the essence of the invention resides primarily in the specially constructed heads and the band or strap winding and slack takeup and clamping means.

The foregoing is considered as illustrative only of the

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principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A handle for engagement with strap means to facilitate the transportation of a load, said handle having spaced portions each with an opening, shaft means in said openings and having a transverse slot for receiving said strap means therein, whereby said shaft means may be rotated to wind said strap means about the same, and means engaging an end portion of said shaft means within one of said spaced openings by which said shaft means can be rotated to subject said strap means to tension and by which continued rotation of said shaft rotating means will cause progressively increased binding of said shaft means in said opening.

2. The invention of claim 1 in which said end portion of said shaft means has an internally threaded bore with an outwardly flared outer end portion and said engaging means is a screw having a generally conical head for reception in said outer end portion whereby upon continued rotation said screw will cause expansion of said shaft means.

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