

[54] LUGGAGE CONSTRUCTION

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[51] Int. Cl.A45c 3/00

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206/68, 2; 220/31 S; 29/472.5, 472.9, 486, 630 D,
499-503; 264/272, 274; 85/37; 156/293; 116/112,
111

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[57]

ABSTRACT

A luggage case having a pair of inwardly facing opposed concave relatively rigid molded shells adapted to abut each other when the case is in a closed condition. Each of the sections includes a rigid framework strip extending around the confronting edge of the shell and includes a means for securing the strip to the shell which includes a hole in the strip where the strip is in contact with the interior of the section. The hole is filled by a rigid material resistant to shear and compatible with and bonded to the material of the concave shell.

4 Claims, 3 Drawing Figures

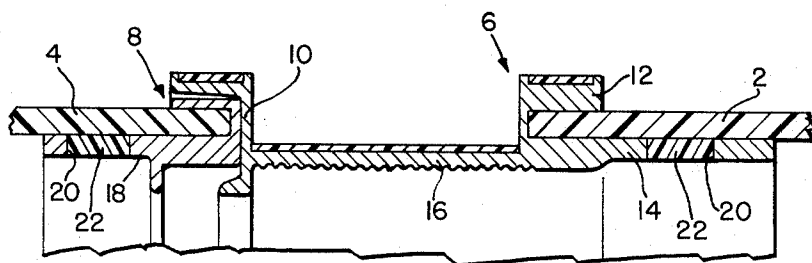


FIG-1

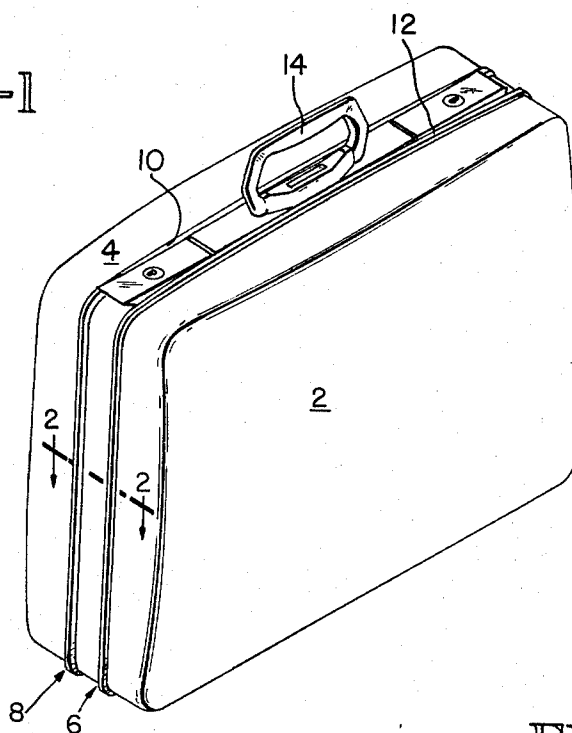


FIG-2

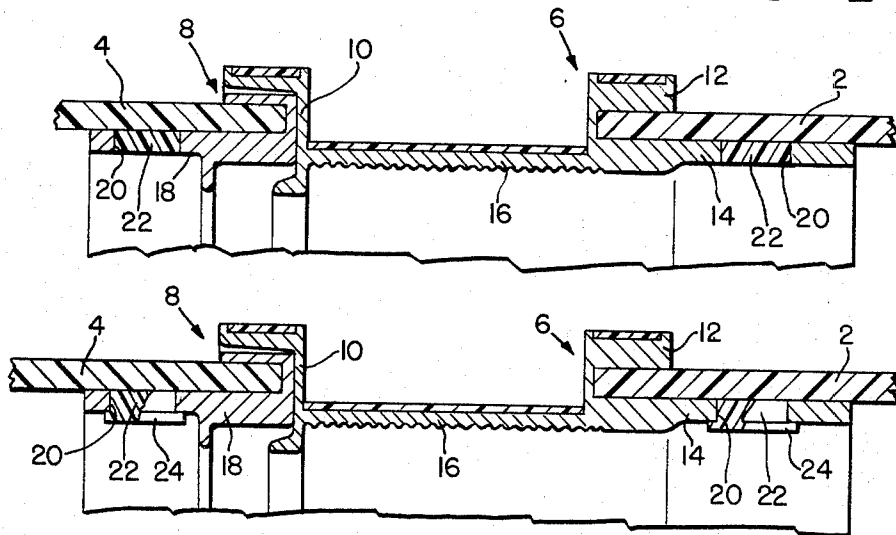


FIG-3

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LUGGAGE CONSTRUCTION

BACKGROUND OF THE INVENTION

There are presently on the market a multiplicity of luggage cases wherein the opposed concave shells are secured to a metallic strip which extends around the abutting edge of the shells. These metallic strips are bonded to the shells by a combination of frictional resistance, the metallic strip being resilient and compressed about the material of the shells, and a plurality of rivets which pass through the shell of the luggage case as well as the portion of the metallic strip which underlies the shell material.

One difficulty with the prior art luggage cases, with the rivets extending through the exterior portion of the case, is the fact that it presents a surface which is not smooth and therefore has a tendency to catch upon articles placed in close proximity. A further problem with the luggage cases of the type hereinbefore described, lies in the fact that when the case has been severely handled the rivets become loose, increasing the danger of catching on objects in close proximity. A severely stressed rivet can pull through exterior material of the case, which is generally of lesser strength than the metallic strip, leaving an unsightly hole and an open passage for the ingress of dirt, water or other foreign material damaging to the contents of the luggage case.

With these problems in mind, it is an object of the present invention to provide a luggage case wherein the exterior portion of the opposing sides is smooth, greatly enhancing the appearance of the luggage case and reducing the chance of snagging upon objects in close proximity to the case.

In accordance with this object and as a feature of the present invention, there is provided a luggage case having opposing concave shells with a rigid strip around the abutting edges of the concave shells, said strips being rigidly adhered to the concave shells but without rivets passing through the exterior portion of the luggage case.

It is another object of the present invention to provide a luggage case wherein the rigid framework strip which is bonded to the opposing edges of the sides of the luggage case is rigidly secured to the side material.

In accordance with this object and as a feature of the present invention, there is provided a luggage case of the type described wherein the rigid strip is secured to the sides of the luggage case by a plurality of lug-like structures which are made of material compatible with that of the sides, bonded thereto and extend only to the interior of the case, passing through the rigid strip. The rigid strip, having once been clampingly pressed against the edge of the shell, will generally retain its shape, inhibiting movement of the strip axially of the lug.

With the above and other features of the invention including various novel details of construction and combinations of parts will now be more particularly described with reference to the accompanying drawings and pointed out in the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective of a luggage case incorporating applicant's inventive rigid framework strip securing means;

FIG. 2 is a section through the luggage case along lines 2—2 of FIG. 1 enlarged to show the details of the fastening means between the rigid strip and the sides of the luggage case; and

FIG. 3 is a section through the luggage case of FIG. 1 showing another species of the fastening means.

DETAILED DESCRIPTION OF THE DRAWINGS

As seen in FIG. 1, the luggage case comprises a pair of concave sections or shells 2, 4 which, when closed into abutting relationship, form the external periphery of the case. The abutting edges of the sides 2 and 4 having at their respective edges interlocking rigid strips 6 and 8 which form the means for attaching the locks 10 and 12 as well as the handle 14 and hinges.

Referring now to FIGS. 2 and 3, it can be seen that the rigid elements 6 and 8 shown in cross-section are secured to the sides 2 and 4 of the case. The rigid elements may be fabricated of any material of sufficient strength to retain the locking elements and to retain the shape imparted to it, shown as metallic.

Referring now particularly to the rigid strip denoted as 6 (to the right of FIG. 2), it will be seen that it comprises an outwardly extending U-shaped portion 10 designed to abut a complementary metallic strip on the side 4 and another substantially J-shaped portion 12 adapted to abut and be secured to the material of the side 2. The rigid strip further includes a wide flange portion 14 adapted to underlie the material of the side 2 and on substantially the same plane a bridging portion 16 which extends outwardly approximately parallel to the internal edge of the side 2 to terminate in the U-shaped portion 10.

The rigid strip 8 on the opposing side 4 is of substantially J-shape with the longer leg 18 of the J underlying the material of the side 4 and the shorter leg and base abutting the edge and overlapping the outer side of the side 4.

When the rigid strips are in place on the respective sides of the case, the portions which sandwich the edge of the shell are squeezed together placing a definite clamping action on the edge of the material thus providing a frictional force retaining the strips in place on the edge of the material. It has been discovered that the greatest stress causing loosening of the metallic strips from the luggage case are in a direction generally parallel to the edge of the case containing the metallic strips and outwardly thereof such as when the case is closed or attempted to be closed with an over abundance of contents therein.

To prevent the tendency to pull the strips from the edges of shells, it has been found necessary to secure the shells to the strips by means other than simply frictional or adhesive bonding. As was noted above in the past this securement has been done by passing a rivet through the metallic structure and the side wall of the case.

As denoted in FIG. 2, the means securing the shell to the strip, preventing lateral relative movement of the shell relative to the strips there is formed within the strip a plurality of holes 20. The holes 20 are located in the widened portion of the strip which underlies the edge of the shell. Inserted in the holes and bonded by heat, adhesive or other means well known in the art, is a plug or dowel of a material which is compatible with, and easily and readily bondable to the material of the sides of the case. As is readily apparent, once a strong bond is secured between the lug-like elements 22 and the sides of the case, the strip is held against lateral movement, the lug element 22 being of a plastic material providing a great deal of resistance to shear.

As seen in FIG. 3, the securing element has further included thereon a wide head portion 24 which overlies the metallic elements thus adding securement for the rigid strip against movement away from the side of the luggage case in an inward direction when such stress does occur.

It is to be understood that for normal use the resistance to movement of the shell away from the strip in a direction axially of the lug-like elements 22 provided by the preformed rigid stripping is sufficient. Only for extremely hard use will it be necessary to supplement this inherent stability by use of enlarged heads 24.

As can be readily seen, the means incorporated herein for bonding the metallic strip to the luggage securely fastens the strip to the associated section thus preventing accidental dislodgement. Since the securing element does not extend to the exterior of the portion it does not detract from the elegant good looks of the case nor present an uneven surface for catching upon proximate articles. The use of the novel fastening means eliminates a portion of the luggage case which already has a hole in it for ingress of dirt or other foreign contaminants.

The embodiments of the invention in which an exclusive property or privilege is claimed are as follows:

1. In a luggage case having a pair of inwardly facing, opposed concave relatively rigid molded shells adapted to abut each other when the case is in a closed condition, each of said shells including a rigid strip extending around the confronting edge of the shell, means for securing the strip to the section comprising;

shell engaging portions on the strip adapted to engage the edge of the shell on opposite surfaces of said shell and frictionally engage said surfaces,

a bridging portion adjoining the two opposing shell engaging portions, adapted to abut the edge of the shell and provide sufficient strength to the strip to ensure constant compressive forces between the opposing strip portions,

a plurality of fastening members securing the strip to the shell, said fastening members adhesively bonded to the interior surface of the shell and extending outwardly thereof to penetrate the innermost shell engaging portion of the strip and prevent relative movement between the shell and the strip, whereby the exterior of the shell presents an unbroken smooth surface.

2. A securing means as in claim 1 wherein the fastening members terminate flush with the inner surface of the strip.

3. A securing means as in claim 1 wherein the fastening members extend through the shell engaging portion of the

strip and terminate in a head larger than the hole through which they extend, providing additional security against spacial separation of the shell and the strip.

4. In a luggage case having a pair of inwardly facing, opposed concave relatively rigid molded shells adapted to abut each other when the case is in a closed condition, each of said shells including a rigid strip extending around the confronting edge of the shell, means for securing the strip to the section comprising:

shell engaging portions on the strip adapted to engage the edge of the shell on opposite surfaces of said shell and frictionally engage said surfaces,

a bridging portion adjoining the two opposing shell engaging portions, adapted to abut the edge of the shell and provide sufficient strength to the strip to ensure constant compressive forces between opposing strip portions,

a plurality of fastening members securing the strip to the shell, said fastening members heat bonded to the interior surface of the shell and extending outwardly thereof to penetrate the innermost shell engaging portion of the strip and prevent relative movement between the shell and strip, whereby the exterior of the shell presents an unbroken smooth surface.

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