Sept. 8, 1959 W. H. HARVEY 2,903,105

LUGGAGE CONSTRUCTION

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FIG.1.

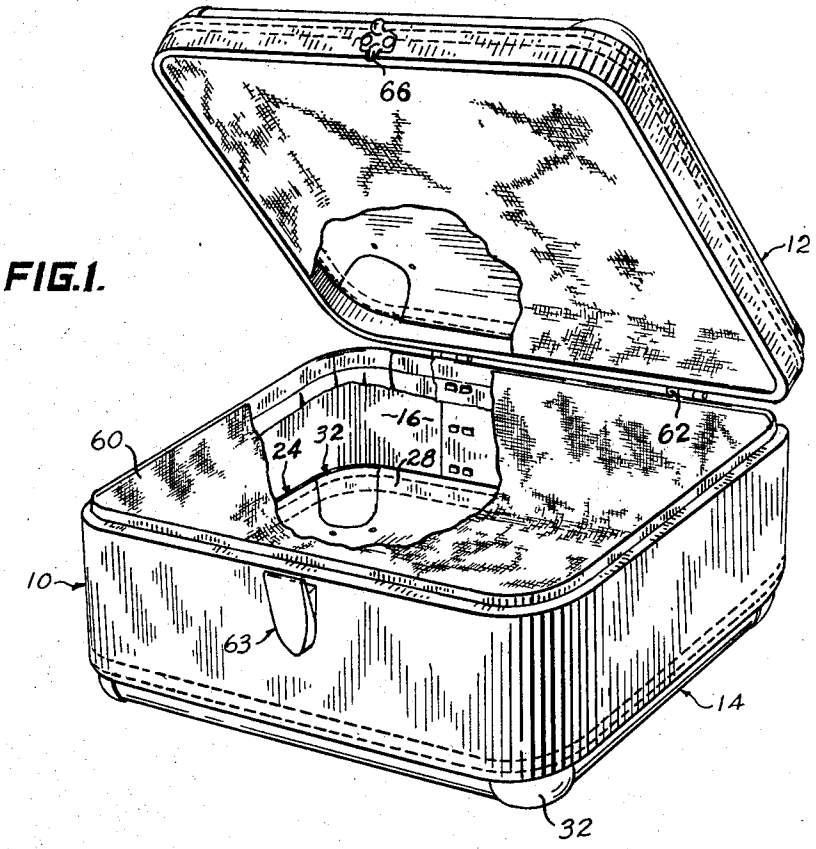


FIG.2.

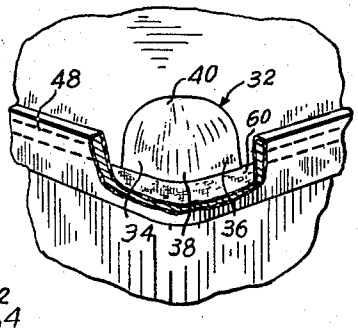
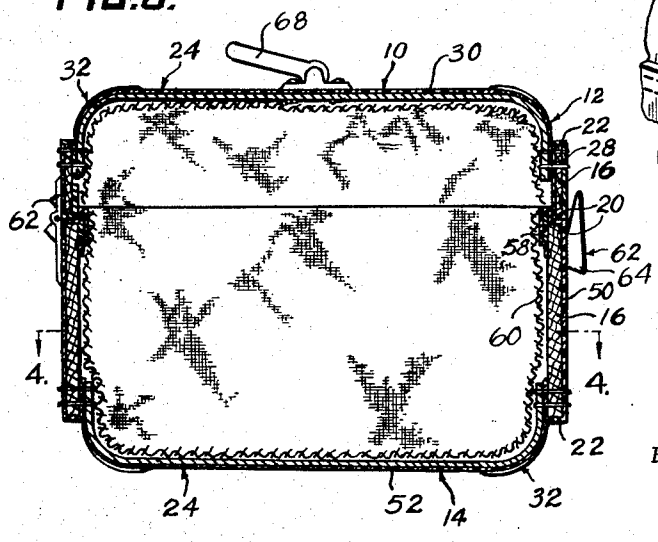


FIG.3.



INVENTOR.
William H. Harvey
BY
ATTORNEY.

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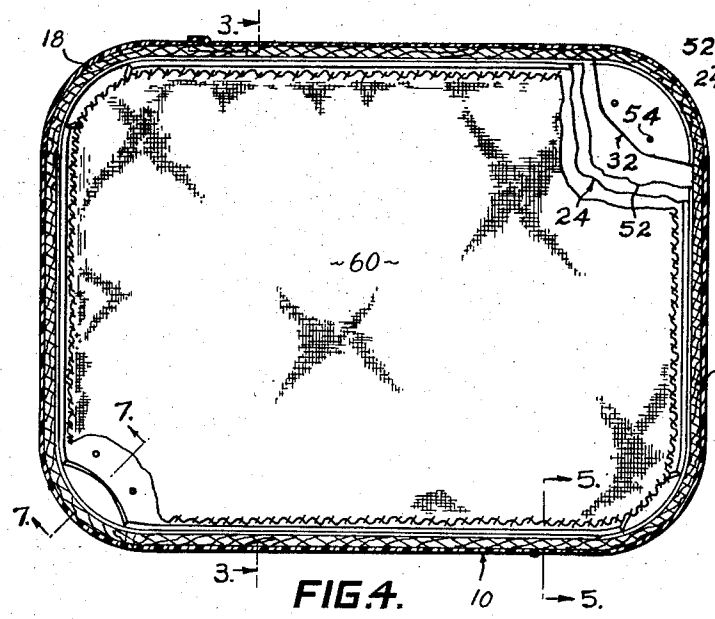


FIG.4.

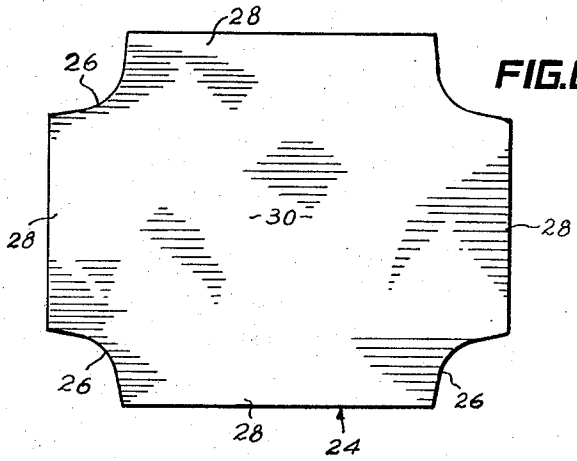


FIG.6.

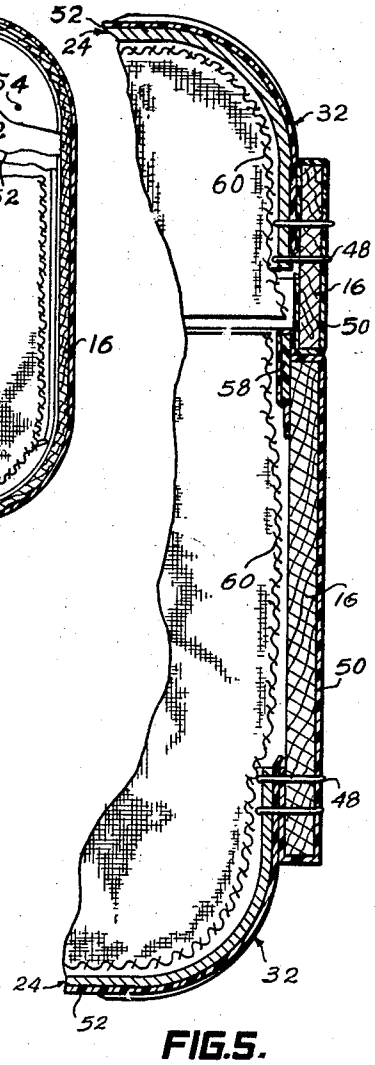


FIG.5.

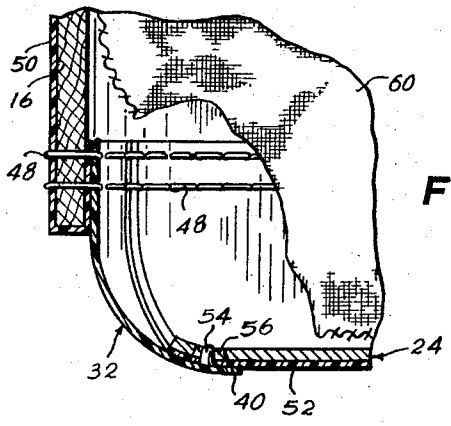


FIG.7.

INVENTOR.
William H. Harvey
BY
ATTORNEY.

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LUGGAGE CONSTRUCTION

William H. Harvey, Prairie Village, Kans., assignor to United Products Corp., Kansas City, Mo., a corporation of Missouri

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7 Claims. (Cl. 190—54)

This invention relates to luggage construction and particularly to luggage which may be fabricated and distributed at a minimum cost without detracting from the overall appearance thereof.

Although luggage has for many years been constructed of various materials and preferably leather because of the attractive appearance of the same as well as the strength and durability characteristics of carefully tanned hides, the high initial cost of leather products as well as the amount of time and labor involved in constructing luggage of leather has resulted in the necessity of marketing the latter at premium prices.

In order to materially lessen the overall cost of articles of luggage, substitute materials have been suggested and utilized which may be purchased at a lower initial price and may be fabricated into the final article with automatic machinery and with less handwork being necessary. Prior inexpensive luggage has, for the most part, included as basic components thereof, structural framing or boxing made of wood, metal, paper or the like and necessitating the use of outermost coverings to hide the unsightly appearance thereof, as well as means for concealing points of juncture of the various materials utilized. Furthermore, considerable hand labor was necessary to form attractive corners and provide various trim sections, as well as present interengaging mating edges, and these operations increased the cost of production without resulting in a particularly good piece of merchandise.

Another complicating factor is the current trend in the manufacture of luggage to provide rounded corners on both the lid and base portions thereof to thereby eliminate any sharp corners or projections. It can be seen that it is difficult to form structural framing or boxing made of wood or metal into a structural component having rounded corners and edges as described, and most manufacturers, in an attempt to solve this problem, have resorted to relatively expensive procedures involving molding or casting the separate components of the luggage in one piece out of synthetic resin polymerized materials having reinforcing glass fibers therein. Both the materials used in such casting or molding operations as well as the machinery necessary to carry out the processes are relatively expensive and require that the luggage sell for a premium price.

It is therefore, the most important object of the present invention to provide luggage having rounded corners and edges and which is constructed of inexpensive, relatively strong, lightweight, readily available materials and which may be fabricated in a minimum of time without the utilization of casting or molding operations.

It is a further important object of the instant invention to provide luggage wherein the individual components are formed of sections of predetermined configuration and which are adapted to be assembled in a minimum of time and with inexpensive machinery, to thereby permit the luggage to be marketed at a low unit cost.

Also an object of this invention is to provide luggage

wherein the basic components of each of the hollow receptacles thereof include a polygonal band closed at one end thereof with a preformed sheet of inexpensive material such as cardboard, and having novel cap means at each corner thereof presenting smooth, arcuate surfaces merging symmetrically with the curved edges of the cover panel secured to the band to thereby present an article of luggage of pleasing overall appearance.

Other important objects of this invention relate to the provision of luggage wherein the cover panel partially closing one end of the polygonal structural band is formed from an initially flat sheet of semi-flexible material having arcuate cutouts at each corner thereof presenting segments projecting outwardly from the central portion of the panel, whereby upon bending of such segments in a direction away from the major plane of the panel, smooth curved edges are provided without the formation of unsightly wrinkles adjacent proximal ends of the segments; to preformed cap means configured to close corresponding arcuate cutouts at each corner of the cover panel and presenting rounded corners merging smoothly with the arcuate edges of the panel disposed in closing relationship to the structural band; to novel means for securing each of the arcuate caps at each corner of the hollow receptacle, to an adjacent area of the cover panel to thereby substantially preclude displacement of the caps from the cover panel; to luggage wherein the basic components of each hollow receptacle may be interconnected during fabrication of the luggage by a simple sewing operation; to improved luggage construction wherein both hollow receptacles presenting the article are of similar construction, with the only material difference relating to provision of a wider structural band forming the sides of each receptacle; and to other important objects and salient features of the instant invention which will become obvious or be explained more fully as the following specification progresses.

In the drawings:

Figure 1 is a perspective view of luggage construction embodying the concepts of the invention with the lid section thereof being raised to illustrate the interior of the article, certain portions of the same being broken away and in section to reveal details of construction;

Fig. 2 is a fragmentary, slightly enlarged view of one corner of the instant luggage, certain parts thereof being broken away and in section to illustrate the novel parts of the present invention;

Fig. 3 is a vertical, cross-sectional view taken on the line 3—3 of Fig. 4 and looking in the direction of the arrows;

Fig. 4 is a horizontal, cross-sectional view taken on the line 4—4 of Fig. 3 and looking downwardly;

Fig. 5 is a greatly enlarged, fragmentary, vertical, cross-sectional view taken substantially on the line 5—5 of Fig. 4;

Fig. 6 is a reduced plan view of a blank from which the unique cover panel of the instant invention is formed; and

Fig. 7 is a greatly enlarged, fragmentary, horizontal, cross-sectional view taken substantially on the line 7—7 of Fig. 4.

Luggage construction embodying the preferred principles of the instant invention is illustrated in the drawings and designated broadly by the numeral **10**. Luggage **10** includes a pair of hingedly interconnected, hollow sections generally designated **12** and **14** which are essentially of the same construction and differ only in minor respects to be hereinafter defined.

Each section **12** and **14** includes a rigid, rectangular band **16** preferably formed of lightweight, inexpensive plywood and suitably molded during the fabrication thereof to present arcuate surfaces at each corner **18**

thereof. Polygonal bands 16 of each section 12 and 14 are identical with the exception that band 16 of section 14 is substantially wider than band 16 of section 12, whereby section 12 serves as the lid of luggage 10 while section 14 presents the principal article-receiving receptacle thereof.

Each band 16 is provided with continuous peripheral edges 20 and 22 defining opposed openings, it being apparent from Fig. 3 that edges 20 of bands 16 of respective sections 12 and 14 are disposed in proximal relationship, while the edges 22 thereof are located remote from one another. Means for partially closing each of the openings defined by respective peripheral edges 22 of bands 16 includes a cover panel broadly designated 24 and constructed of an initially flat sheet of semi-flexible material such as cardboard which is normally rectangular in configuration and provided with arcuate edges 26 at each corner thereof presenting cutouts and thereby defining individual segments 28 projecting outwardly from central, imperforate portion 30 of panel 24. As shown by Figs. 3 and 4, rectangular, central portion 30 of each cover panel 24 is substantially equal in area to a respective opening presented by peripheral edges 22 of sections 12 and 14, and corresponding segments 28 of each cover panel 24 are bent in a direction away from the major plane of central portion 30, whereby each segment 28 extends laterally from central portion 30 in substantially perpendicular relationship thereto. Each segment 28 is bent in a manner so that the same merges smoothly with a respective central portion 30 of cover panels 24, with the zone of interconnection being transversely arcuate to assure elimination of any sharp edges in the final luggage construction.

The outermost margins of each segment 28 are disposed in partially overlapping relationship to a corresponding side of respective bands 16, with the central portions 30 of cover panels 24 disposed in parallel spaced relationship to a plane through respective peripheral edges 22 of bands 16. It can be seen that by virtue of the cutouts defined by arcuate edges 26 of cover panels 24, openings are presented at each corner 18 of sections 12 and 14.

Caps broadly designated by the numeral 32 are provided in overlaying relationship to the openings defined by arcuate edges 26 of cover panels 24 and also serve to improve the overall appearance of sections 12 and 14 by virtue of the arcuate surfaces of the same. As most clearly shown in Figs. 2 and 7, each cap 32 is constructed of preformed material preferably in the nature of a polymerized synthetic resin and having a planar portion 34 overlapping one side of a respective band 16 and a second planar portion 36 overlying a similar portion of a proximal side of a corresponding band 16, with planar portions 34 and 36 being interconnected throughout a transversely arcuate intermediate zone 38. Upper portion 40 of each cap 32 is disposed in substantially perpendicular relationship to planar portions 34 and 36 and is integral with the latter through a curved zone extending from the outer edge of planar portion 34 around the cap 32 to the outer portion of planar portion 36 thereof. It is therefore apparent that all exposed surfaces of caps 32 are three dimensionally arcuate and merge smoothly and symmetrically with proximal portions of adjacent segments 28 and central portion 30 of corresponding cover panels 24.

Various means may be employed for securing caps 32 and cover panels 24 to respective bands 16 but the most satisfactory and least expensive method has been found to utilize lines of stitching 48 produced by a conventional industrial sewing machine passing through bands 16, panels 24 and caps 32 to thereby securely interconnect the latter.

At this juncture it is to be pointed out that in order to improve the overall exterior appearance of luggage 10, it is most usually desirable to place an outer layer of suitable finish material over bands 16 and cover panels 24. Outer finish material designated 50 and 52 provided on and adhesively secured to bands 16 and cover panels 24 respectively is preferably of a wear-resistant, synthetic resin composition, and covers all normally externally exposed surfaces of such components. Lines of stitching 48 preferably pass through outer finish material 50 on bands 16 to thereby improve the appearance of luggage 10. It is also contemplated that outer finish material 50 and 52 have a relatively rough surface to simulate more expensive molded structural components, and it is also pointed out that caps 32 may be formed during molding of the same so that the normal outer surfaces thereof have a rough appearance similar to that of finish materials 50 and 52. In this manner, caps 32 blend with finish material 50 and 52 on bands 16 and cover panels 24 respectively, and caps 32 thereby improve the appearance of luggage 10 without in any way detracting from the same.

In order to assure firm engagement of upper portions 40 of each of the caps 32 with proximal overlapped areas of cover panels 24, it has been found advantageous to provide elongated, semi-flexible, inwardly extending projections 54 on the normally innermost surface of each upper portion 40 of caps 32 and disposed in substantially perpendicular relationship to upper portions 40. Openings 56 in central portions 30 of cover panels 24 provided for each of the projections 54 complementally and frictionally receive the same to thereby preclude displacement of upper portions 40 of caps 32 from adjacent overlapped areas of cover panels 24. It can be recognized that projections 54 may be formed integrally with caps 32 during molding of the same, thereby permitting the unit to be manufactured at a low unit cost and providing novel securing means for joining caps 32 to respective cover panels 24. Inasmuch as suitable clearance openings in outer finish material 52 on cover panels 24 are provided for projections 54 and therefore in alignment with openings 56, it can be perceived that finish coating 52 may be placed on cover panels 24 prior to assembling of sections 12 and 14, thus reducing the construction time of luggage 10.

Section 14 having the wide band 16 is provided with an inner, rectangular member 58 suitably secured to band 16 thereof adjacent edge 20 and projecting upwardly beyond such edge 20 a slight distance to present an L-shaped groove for receiving the proximal peripheral edge 20 of the band 16 of section 12. It can be seen that the appearance of luggage 10 is improved by virtue of passing outer finish material 50 over the peripheral edge 20 of the respective band 16 and thence over loop member 58 to thereby substantially conceal the same. By the same token, it is desirable to provide a lining within each section 12 and 14 in overlying relationship to the exposed interior surfaces of bands 16, cover panels 24 and caps 32. Linings 60 are preferably adhesively secured to respective sections 12 and 14 to substantially preclude removal of the same. Linings 60, which may be of cloth, extend outwardly from each section 12 and 14 to areas adjacent respective peripheral edges 20 of bands 16 to thereby conceal the margins of outer finish materials 50 and thereby presenting an article of luggage having improved appearance at a very low cost.

Conventional hinges 62 swingably interconnect bands 16 of respective sections 12 and 14 at one side of the same to thereby permit section 12 to be swung relative to section 14. Also, it is desirable to provide latch means 63 in direct opposition to hinges 62 and including a lock 64 on the band 16 of section 14 and a projecting catch 66 in alignment therewith on the band 16 of section 12. Handle 68 swingably secured to central portion 30 of cover panel 24 forming a part of section 12 facilitates handling of luggage 10, although it can be recognized that handle 68 may be positioned adjacent latch means

62 if so desired and particularly if luggage 10 is of larger size than illustrated in the accompanying drawings.

It is now apparent that the present article of luggage has rounded corners and edges which improve the overall appearance of the same without increasing the cost of manufacture of the luggage. The low cost of fabrication is attributable to the utilization of readily available, lightweight, inexpensive materials which may be formed into suitable designated configuration without the necessity of employing expensive molds and similar prior practices. Not only is the finished product sturdy in construction but the appearance thereof is similar to more expensive units and produced at a fraction of the cost of such prior molded articles.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. In luggage construction, structure including a rigid, polygonal band having a number of sides and continuous peripheral edges defining opposed openings; a cover panel mounted on the band in partial closing relationship to one of said openings and including a central, imperforate portion configured substantially complementally with said band and having individual, outwardly projecting segments for each of said sides of the band, said segments extending laterally from said central portion in one direction, overlapping and secured to respective sides of the band, merging smoothly with said central portion of the panel throughout corresponding transversely arcuate zones and presenting notches between proximal segments disposed at respective corners of the band defined by said sides thereof; and cap means secured to the band at each corner thereof in closing relationship to corresponding notches in said cover panel.

2. In luggage construction, structure including a rigid, polygonal band having a number of sides and continuous peripheral edges defining opposed openings; a cover panel mounted on the band in partial closing relationship to one of said openings and including a central, imperforate portion configured substantially complementally with said band and having individual, outwardly projecting segments for each of said sides of the band, said segments extending laterally from said central portion in one direction, overlapping and secured to respective sides of the band, merging smoothly with said central portion of the panel throughout corresponding transversely arcuate zones and presenting notches between proximal segments disposed at respective corners of the band defined by said sides thereof; and semi-flexible, molded, three dimensionally curved cap means secured to the band at each corner thereof in closing relationship to corresponding notches in said cover panel.

3. Luggage construction as set forth in claim 1 wherein said cover panel has an arcuate cutout at each corner thereof whereby the edges of said cover panel defining said notches are continuously curved to eliminate wrinkles in the panel caused by bending of said segments into said outwardly projecting positions thereof.

4. Luggage construction as set forth in claim 3 wherein the margin of each of said cap means normally adjacent a respective arcuate edge of the cover panel defining a corresponding notch is configured substantially complementally with said edge.

5. Luggage construction as set forth in claim 4 wherein the extremity of each of said cap means remote from the band is provided with means securing the same to said central portion of the cover panel, and said means securing each of said cap means to the cover panel includes elongated, flexible projections extending from the surface of respective cap means normally engaging the cover panel and frictionally received within corresponding openings in said cover panel.

6. Luggage construction as set forth in claim 1 wherein is provided common means for securing the segments and said cap means to the band.

7. In luggage construction, a pair of hollow, hingedly interconnected structures each including a rigid, polygonal band having a number of sides and continuous peripheral edges defining opposed openings, a cover panel mounted on the band in partial closing relationship to one of said openings and including a central, imperforate portion configured substantially complementally with said band and having individual, outwardly projecting segments for each of said sides of the band, said segments extending laterally from said central portion in one direction, overlapping and secured to respective sides of the band, merging smoothly with said central portion of the panel throughout corresponding transversely arcuate zones and presenting notches between proximal segments disposed at respective corners of the band defined by said sides thereof, and cap means secured to the band at each corner thereof in closing relationship to corresponding notches in said cover panel.

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