Sept. 3, 1957 M. KATZ 2,805,077

REMOVABLE PORTABLE ROLLERS FOR LUGGAGE

Filed Nov. 17, 1954 3 Sheets-Sheet 1

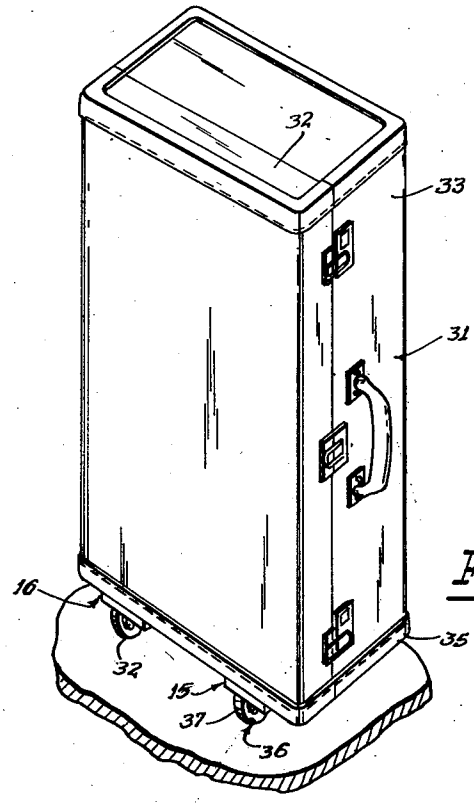


Fig. 1

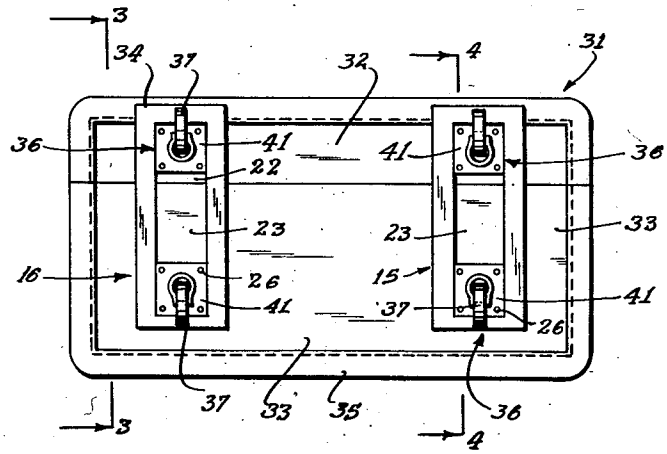


Fig. 2

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REMOVABLE PORTABLE ROLLERS FOR LUGGAGE

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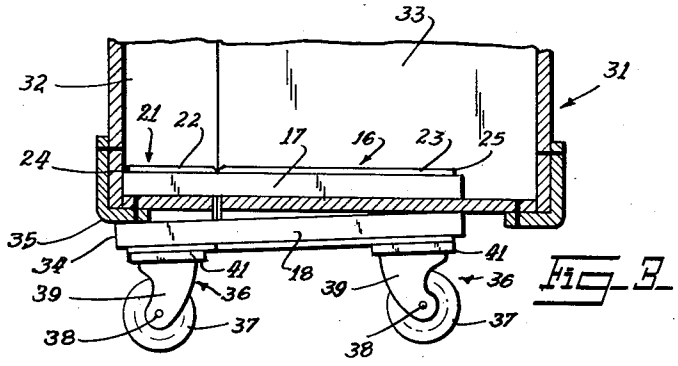


Fig. 3

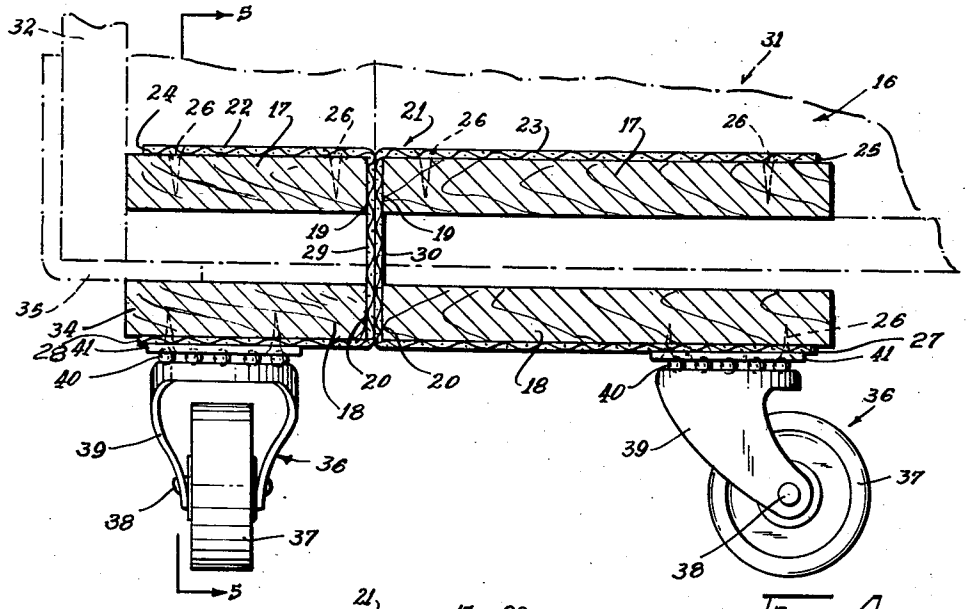


Fig. 4

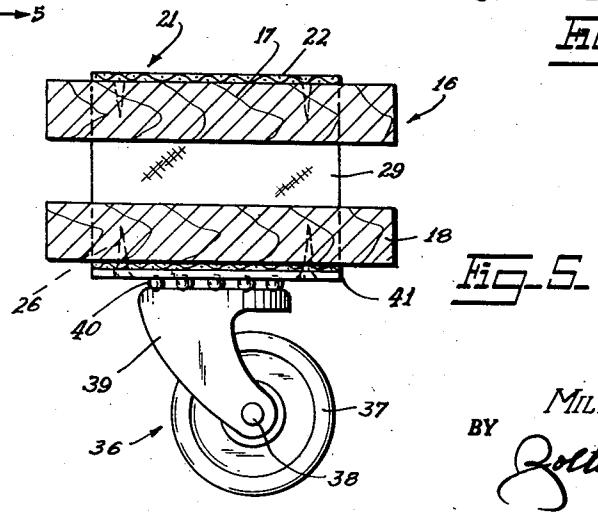


Fig. 5

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REMOVABLE PORTABLE ROLLERS FOR LUGGAGE

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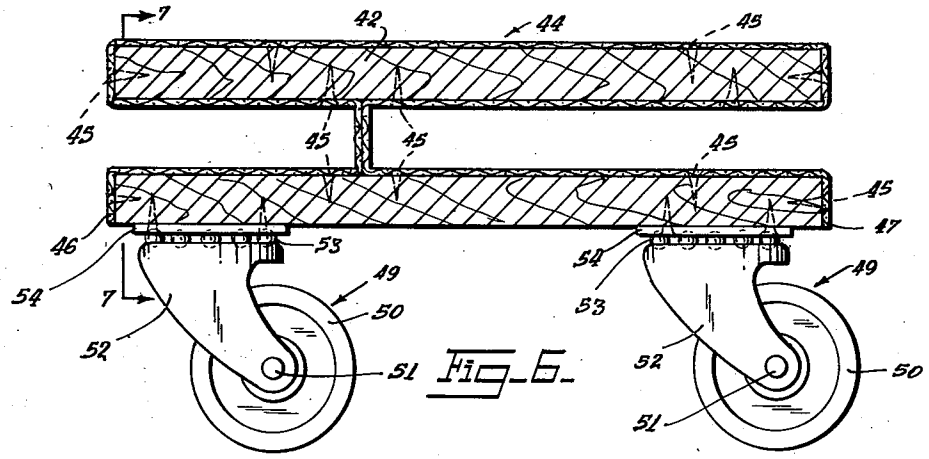


Fig. 6.

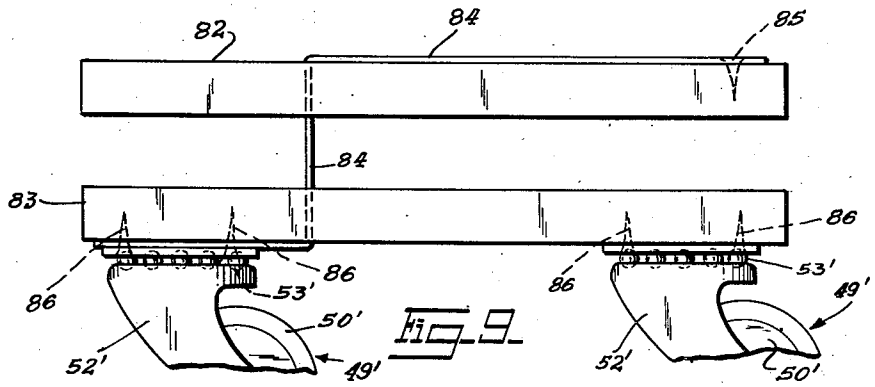


Fig. 9.

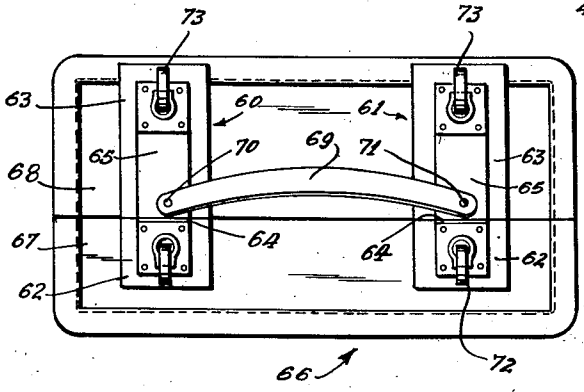


Fig. 8.

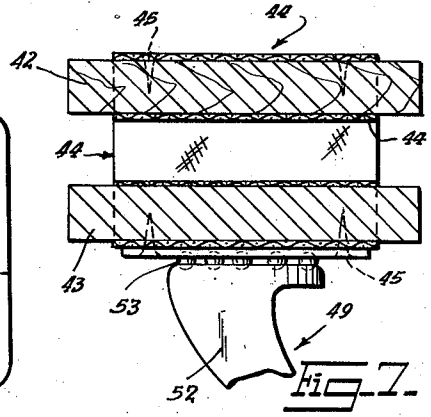


Fig. 7.

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2,805,077

REMOVABLE PORTABLE ROLLERS FOR LUGGAGE

Milton Katz, Brooklyn, N. Y.

Application November 17, 1954, Serial No. 469,515

12 Claims. (Cl. 280—47.13)

This invention relates to new and useful improvements in luggage moving and carrying devices.

More particularly, the present invention proposes the construction of an improved luggage carrying and moving device in which a set of removable casters can easily and quickly be removably attached to a piece of luggage merely by closing the lid of the piece of luggage on a part of the device.

Still further, the present invention proposes forming the removable casters with an inner and outer rigid member connected by a thin flexible member in such a way that the rigid members will be frictionally held to the piece of luggage when the lid of the piece of luggage is closed on a part of the thin flexible member.

As a further object, the present invention proposes forming two sets of the caster-bearing devices with a carrying handle connecting them so that when they are secured to a piece of luggage, the piece of luggage can either be moved on the casters or carried by the strap.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of a piece of luggage and of two sets of removable casters constructed and arranged in accordance with the present invention.

Fig. 2 is a bottom plan view of the structure shown in Fig. 1.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2, but with the piece of luggage shown in dot-dash outline.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 4 but illustrating a modification of the present invention.

Fig. 7 is a sectional view taken on line 7—7 of Fig. 6.

Fig. 8 is a view similar to Fig. 2 but illustrating another modification of the present invention.

Fig. 9 is a side elevational fragmentary view showing a modified form of the portable caster device.

The portable caster device for luggage, in accordance with the first form of the invention illustrated in Figs. 1 to 5, inclusive, has two separate sets or units 15 and 16, identically constructed and arranged.

Units 15 and 16 each has an inner rigid member 17 which may be a block of wood or the like, and a similar outer rigid member 18. The rigid members 17 and 18 contain aligned openings 19 and 20 and a thin flexible member 21 in the form of two straps 22 and 23 have ends 24 and 25 respectively secured by tacks, nails or other fasteners 26 to the inner rigid member 17. Straps 22 and 23 have their other ends 27 and 28 secured by fasteners 26 to the outer rigid members 18. The central portions 29 and 30 of straps 22 and 23 extend through

the openings 19 and 20 and may be centrally connected between the rigid members 17 and 18.

Rigid members 17 and 18 preferably have square edges and are adapted to fit on a piece of luggage 31. The inner rigid member 17 fits inside the piece of luggage 31 crosswise of it and the outer rigid member 18 fits outside the piece of luggage 31 substantially parallel to the inner rigid member 17. The central portions 29 and 30 of straps 22 and 23 are of a length to hold the rigid members 17 and 18 close against the piece of luggage 31 when the center portions are extending between the closed lid 32 and the body 33 of the piece of luggage 31.

Center portions 29 and 30 of straps 22 and 23 are, however, long enough to permit a wedging action between the two rigid members 17 and 18 when the end 34 of the outer rigid member 18 is bearing against the binding 35 on the outside of the piece of luggage 31. This wedging action prevents the slipping of the units 15 and 16 once they have been secured to the piece of luggage in the manner above described.

Mounted at the ends of the outer rigid members 18 by fasteners 26, swivelly and rotatably, is a pair of casters 36. The casters 36 contain caster wheels 37, axles 38, brackets 39, ball bearings 40, and mounts 41. The mounts 41 are secured by fasteners 26 through straps 22 and 23 to the outer rigid member 18.

To mount the removable units 15 and 16 to a piece of luggage 31, the inner rigid members 17 are placed inside with the central portions 29 and 30 of straps 22 and 23 extending between the lid 32 and the body 33 of the piece of luggage. The lid is then fastened, closed or locked in the usual manner.

The outer rigid members 18 will then be disposed securely on the outside of the piece of luggage spaced apart from one another and with caster wheels 37 ready to support the piece of luggage 31 rotatably and stably.

It is obvious that only one unit 15 or 16 could be used if desired and that only one caster wheel 37 could be mounted on an outer rigid member 18 if so desired.

The modification of the present invention illustrated in Figs. 6 and 7 is characterized by the provision of an inner rigid member 42 and an outer rigid member 43 spaced apart and connected together by a single thin flexible strap or member 44. The strap 44 extends completely around the inner rigid member 42 and is secured to it by tacks, nails or like fasteners 45. Strap 44 extends doubled to the outer rigid member 43 and has ends 46 and 47 which are fastened by fasteners 45 to the outer rigid member 43. The end 46 of strap 44 extends partly around the outer rigid member 43 in one direction and the end 47 extends partly around the member 43 in the opposite direction.

A pair of casters 49 are swivelly and rotatably mounted on the outer rigid member 43. Casters 49 have caster wheels 50, axles 51, brackets 52, ball bearings 53 and mounts 54. The mounts 54 are secured by fasteners 45 to the outer rigid member 43.

The modification of the invention illustrated in Fig. 8 is characterized by the provision of two caster units 60 and 61 each constructed similarly to the units 15 and 16 illustrated in Figs. 1 through 7 and described above. Each unit however has its outer rigid members 62 and 63 joined together by straps 64 and 65 and disposed on the outside of a piece of luggage 66 over the lid 67 and body 68 of the piece of luggage.

A flexible carrying handle 69 has its ends 70 and 71 connected to the units 60 and 61 and extends between the outer rigid members 62 of each unit. When it is desired to carry the luggage 66 by handle 69, the units 60 and 61 may be spaced close enough together to permit easy purchase on the handle. When it is desired

to move the luggage 66 by the caster rollers 72 and 73 rotatably and swivelly attached to the outer rigid members 62 and 63, the units 60 and 61 may be spaced far enough apart to stretch taut the carrying handle.

In Fig. 9 an inner rigid member 82 and an outer rigid member 83 are shown to be spaced apart and connected by a single, one or more ply, thin flexible strap or member 84. The strap member 84 extends partially at the outer side of the inner rigid member 82 and is secured to it by tacks, nails or the like fasteners 85. Strap 84 also extends partially over the outer side of the outer rigid member 83 and is secured thereto by fasteners 86.

A pair of casters 49' are attached to the outer side of the outer rigid member 83 similarly to that shown in Fig. 6 and the various parts may be recognized by corresponding reference numerals with a prime added.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably mounted on the outer rigid member, and a thin member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the members and adapted to extend between the closed lid and body of a piece of luggage.

2. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the rigid members and adapted to extend between the closed lid and body of a piece of luggage, said thin flexible member being a pair of straps each having one end secured to the outer rigid member and one end secured to the inner rigid member, said rigid members having aligned openings for the connecting portions of the straps to extend therethrough.

3. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members and adapted to extend between the closed lid and body of a piece of luggage, said thin flexible member being a pair of straps each having one end secured to the outer rigid member and one end secured to the inner rigid member, said rigid members having aligned openings for said straps to extend therethrough, said straps being centrally connected together in the space between said inner and outer rigid members.

4. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member connecting the inner and outer rigid members and adapted to extend between the closed lid and body of a piece of luggage, said thin flexible member being a single strap extending lengthwise around and secured to the inner rigid member and extending doubled through the space between said members to the outer rigid member and along the inner surface thereof with the ends of the strap fastened to the outer rigid member.

5. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted in the outer rigid member, and a thin flexible member connecting the inner and outer rigid members and adapted to extend between the closed lid and body of a piece of luggage, said thin flexible member being a single strap extending lengthwise around and secured to the inner rigid member and extending doubled through the space between said members to the outer rigid member and along the inner surface thereof with the ends of the strap fastened to the outer rigid member, said strap having one end extending partly around the outer rigid member in one direction and another end extending partly around the outer rigid member in the opposite direction.

6. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the members and adapted to extend between the closed lid and body of a piece of luggage, said rigid members being blocks.

7. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the members and adapted to extend between the closed lid and body of a piece of luggage, said rigid members being blocks with square edges.

8. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the members and adapted to extend between the closed lid and body of a piece of luggage, and a second set of inner and outer rigid members, flexible straps and casters similarly connected together and adapted to fit in spaced relation on a piece of luggage for a set of two pairs of casters.

9. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer

rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the members and adapted to extend between the closed lid and body of a piece of luggage, said thin flexible member being a pair of straps each having one end secured to the outer rigid member and one end secured to the inner rigid member, said rigid members having aligned openings for said straps to extend therethrough, said straps being centrally connected together in the space between said inner and outer rigid members and a second set of inner and outer rigid members, flexible straps and casters similarly connected together and adapted to fit in spaced relation on a piece of luggage.

10. Removable caster construction for luggage comprising an elongated inner rigid member adapted to fit inside a piece of luggage crosswise thereof, an elongated outer rigid member adapted to fit on the outside of a piece of luggage crosswise thereof closely spaced from and parallel to said inner member, a caster rotatably and swivelly mounted on the outer rigid member, and a thin flexible member extending along the outer surfaces of the inner and outer rigid members with a connecting portion extending across the space between the members and adapted to extend between the closed lid and body of a piece of luggage, said thin flexible member being a single strap extending around and secured to the inner rigid member and extending doubled to the outer rigid member with the ends of the strap fastened to the outer rigid member, said strap having one end extending partly around the outer rigid member in one direction and another end extending partly around the outer rigid member in the opposite direction, and a second set of inner and outer rigid members, flexible straps and casters similarly connected together and adapted to fit in spaced relation on a piece of luggage.

11. Removable caster construction for a rectangular-shaped piece of luggage having a body and a hinged lid, said construction comprising a caster structure adapted

to be mounted adjacent each side of the piece of luggage crosswise thereof, at one end thereof, each caster structure including a first elongated rigid member adapted to be mounted on the inner surface of the piece of luggage at the side thereof and crosswise thereof, said inner rigid member having a transverse opening therein, a second elongated rigid member adapted to be mounted on the outer surface of the piece of luggage in line with the inner rigid member, said outer rigid member having a transverse opening adapted to align with the opening in the inner rigid member, two casters rotatably and swiivelly mounted on the outer rigid member, and a pair of thin flexible straps, one of said straps having one end secured to the surface of the inner rigid member at one end thereof and its other end secured to the surface of the outer rigid member at the adjacent end of said outer rigid member, with its central portion extending through the aligned transverse openings and through the juncture between the body and lid of the piece of luggage when the structure is mounted on the piece of luggage, the other strap of the pair of straps having one end secured to the surface of the inner rigid member at the opposite end thereof and its other end secured to the surface of the outer rigid member at the adjacent end of said outer rigid member, with its central portion extending through the aligned transverse openings and through the juncture between the body and lid when the structure is mounted on the piece of luggage.

12. A removable caster construction as defined in claim 11 wherein the straps are connected together at the central portions thereof.

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