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(56) Documents cited  
GB 0838553 A GB 0805342 A EP 0199993 A1  
US 4655329 A  
  
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UK CL (Edition K) A4G  
INT CL<sup>5</sup> A45C

(54) Suitcase construction

(57) A collapsible suitcase consists of a collapsible, eg. flexible, shell (10) and removable stiffening frames (23) in the form of resilient loops having a shape corresponding to the lateral cross-sectional shape of the suitcase. The frames may be retained in end compartments (19), or may be located within the central compartment of the case by means of tabs (24, Fig 3, not shown) or pockets (25, Fig 4, not shown).

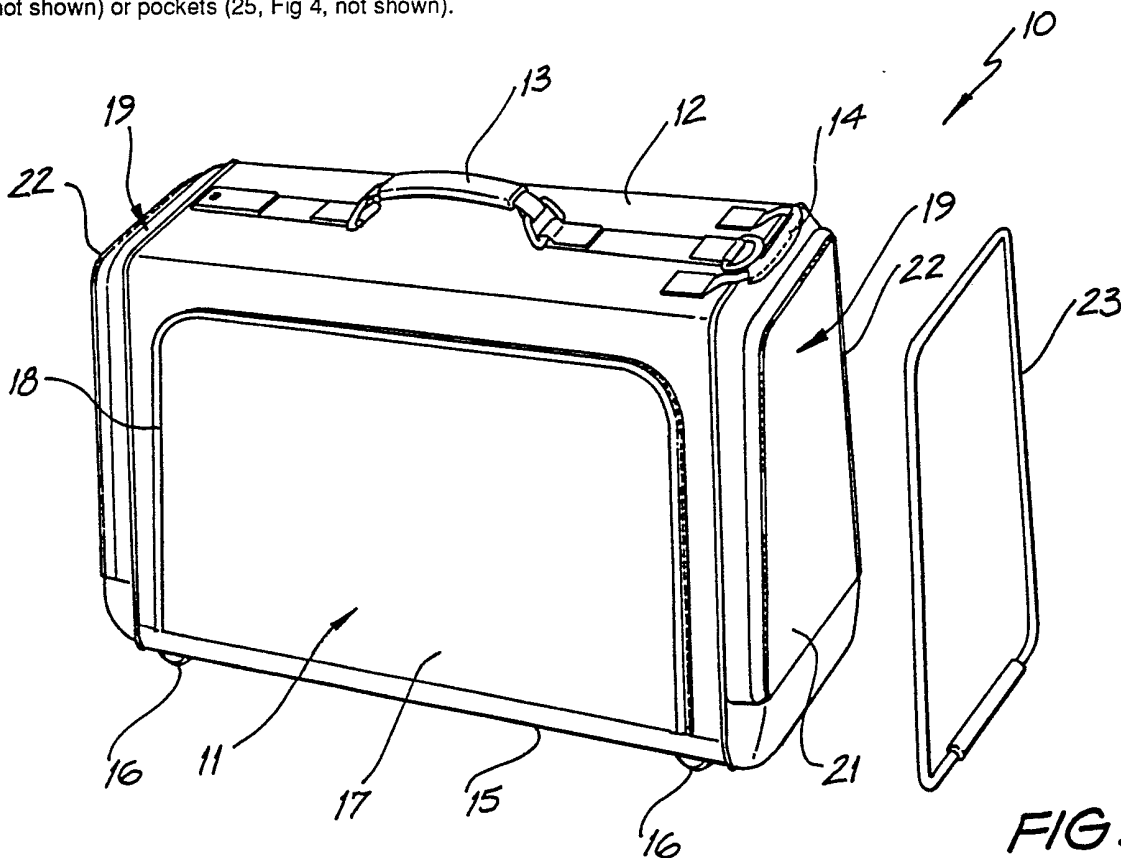


FIG. 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

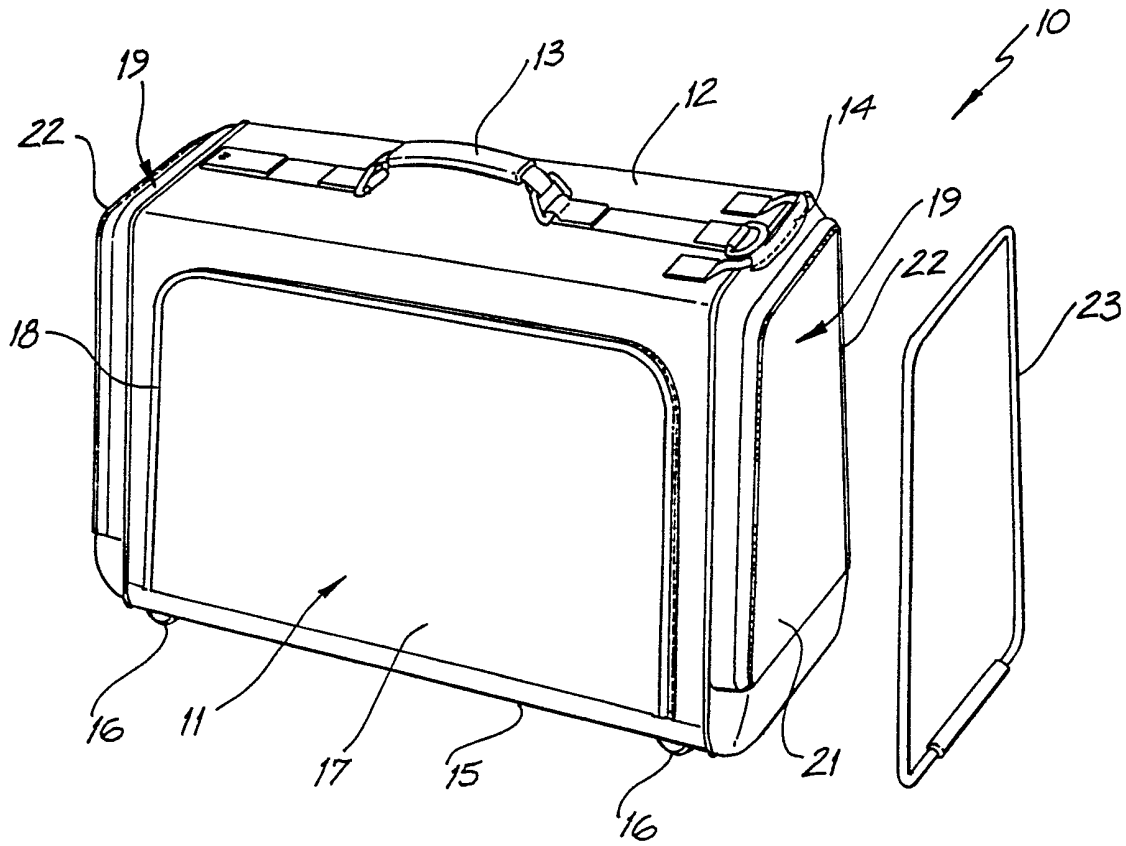


FIG. 1

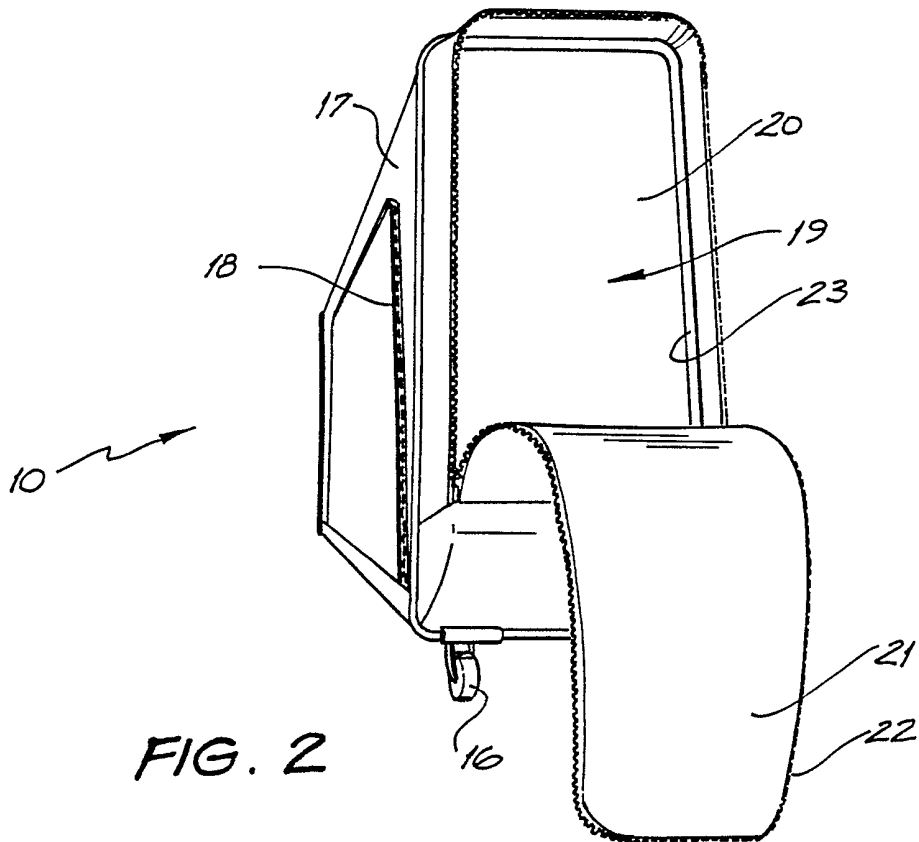


FIG. 2

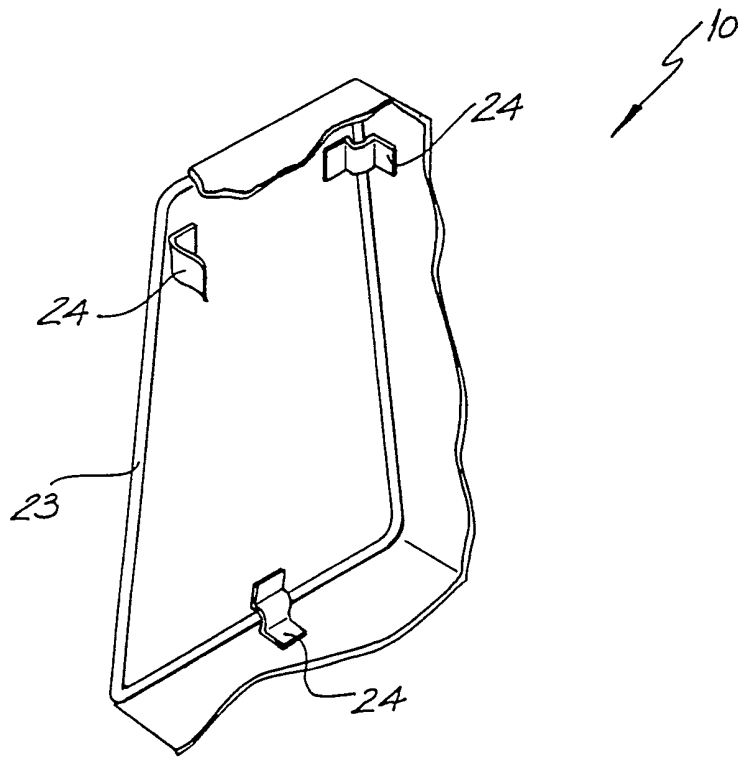


FIG. 3

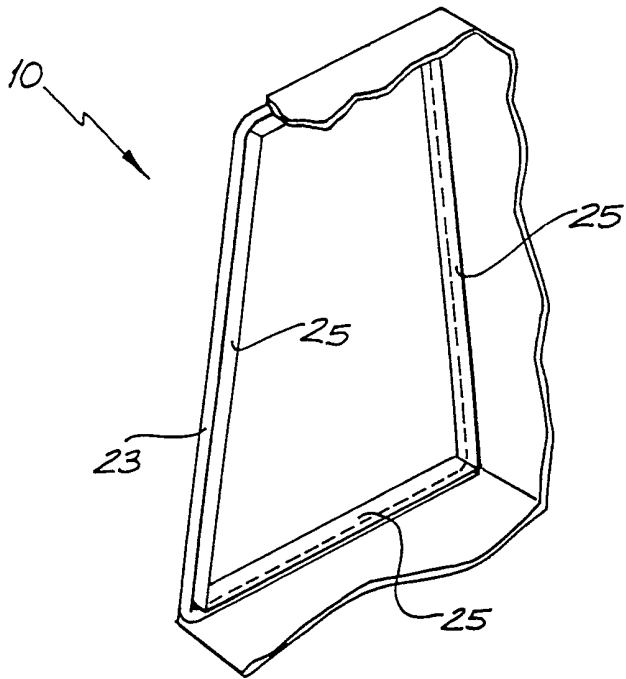


FIG. 4

SUITCASE CONSTRUCTION

The present invention relates to an improved suitcase construction which allows the suitcase to be collapsed when not in use.

5 Prior art collapsible suitcases have included cardboard panels at the end walls of the suitcase. These panels were hinged to the suitcase at the bottom, to allow the panels to be folded against the bottom for collapsing the case. The main  
10 disadvantages of this prior art construction were the additional weight and limited support provided by the end panels.

The present invention seeks to obviate these  
15 disadvantages or at least to provide the public with a choice.

The present invention is characterised in having a  
20 removable frame.

Thus, in one broad form, the present invention provides a collapsible suitcase comprising one or more stiffening frames and a collapsible shell having means for removable attachment of the frames.  
25

Preferably, the attachment means are adapted to hold the frames inside the shell, preferably adjacent one or more walls of the shell, more preferably near the ends of the suitcase. The shell may include end  
30 compartments adapted to receive the frames to hold the frames against dividing walls separating the end compartments from a central compartment.

The frames may be formed as resilient loops having a  
35 shape substantially corresponding to the lateral cross-sectional shape of the inside of the suitcase.

Preferred embodiments of the present invention shall now be further described with reference to the accompanying drawings, in which:-

5 Figure 1 is an exploded perspective view of a suitcase;

Figure 2 is a perspective view of the suitcase of Figure 1 with an end compartment opened to show the  
10 stiffening frame in position; and

Figure 3 and 4 show alternative embodiments of the invention.

15 The suitcase 10 has a large central compartment 11 of a generally rectangular shape. The top wall 12 is provided with a handle 13 and a corner strap 14 for transport of the suitcase and the bottom wall 15 has  
20 castors 16. One of the side walls 17 has a sliding clasp fastener 18 therein to allow access to the central compartment.

The suitcase also has end compartments 19 separated from the central compartment 11 by dividing walls 20.  
25 The end compartments are tapered as shown, with end walls 21 having sliding clasp fasteners 22 to allow access.

30 The shell of the suitcase may be formed of flexible nylon material or other flexible material known for the manufacture of luggage. The top 12 and bottom 15 walls should be reinforced and stiffened to take the weight of clothing or other articles placed in the suitcase.

35 The suitcase is provided with a pair of removable frames 23 each formed as a resilient loop. The frame

may be formed from plastic tubing or the like and is similar in shape to the lateral cross-section of the suitcase. In the case of the illustrated suitcase, the frame is generally rectangular.

5

To assemble the suitcase, one opens fasteners 22 and inserts a frame 23 in each end compartment 19. As shown best in Figure 2, the taper of the end compartments holds frames 23 in place against the dividing walls 20. By forming the frames as resilient loops, the frames give a significant degree of lateral stiffness to the suitcase while adding very little weight. The stiffened top and bottom walls 12 and 15 provide the end-to-end compression strength.

10  
15 Furthermore, the looped frames take up only a small volume in the end compartments, leaving the remainder of the compartments free for use.

To collapse the suitcase, one simply removes the frames from the end compartments. The frames may be stored in the central compartment and the stiffened top and bottom walls 12 and 15 of the suitcase are folded in over one of the side walls 17 to flatten the suitcase for storage.

25

As shown in the fragmentary views of the inside of one end of a suitcase in Figs. 3 and 4 respectively, the frame may removably be attached to the inside of end walls of a suitcase by means such as tabs 24 one end of each of which may detachably be secured by a gripping surface material such as that sold under the trade mark Velcro, or by pockets 25. This allows the present invention to be used in suitcases having a single compartment.

30

Claims:-

1. A collapsible suitcase comprising one or more stiffening frames and a collapsible shell having means for removable attachment of the frames.
2. A suitcase according to claim 1 wherein the attachment means are adapted to hold the frames inside the shell.
3. A suitcase according to claim 2 wherein the attachment means are adapted to hold the frames adjacent one or more walls of the shell.
4. A suitcase according to claim 3 wherein the attachment means are adapted to hold the frames near opposed ends of the shell.
5. A suitcase according to claim 4 wherein the shell comprises end compartments separated from a central compartment by dividing walls, with the end compartments being adapted to receive the frames.
6. A suitcase according to claim 5 wherein the end compartments are adapted to hold the frames against the dividing walls.
7. A suitcase according to claim 4 comprising at least a main compartment, said attachment means being within said main compartment and adjacent opposed ends thereof.
8. A suitcase according to claim 7 wherein said attachment means comprise tabs.
9. A suitcase according to claim 7 wherein said

attachment means comprise pockets locating said frames.

10. A suitcase according to any preceding claim wherein the frame is formed as a resilient loop, the shape of the loop substantially corresponding to a lateral cross-sectional shape of the inside of the shell.

11. A suitcase substantially as herein described with reference to the accompanying drawings.



**Patents Act 1977**  
**Examiner's report to the Comptroller under**  
**Section 17 (The Search Report)**

Application number 9100544.7

<b>Relevant Technical fields</b> (i) UK Cl (Edition K ) A4G  (ii) Int Cl (Edition 5 ) A45C  <b>Databases (see over)</b> (i) UK Patent Office  (ii)	<b>Search Examiner</b>  MRS R SHOEFIELD
	<b>Date of Search</b>  12-02-91

Documents considered relevant following a search in respect of claims 1-10

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
A	GB 838553 (SINCLAIR) see especially page 1, lines 85-90	5,6
X	GB 805342 (GILCHRIST & FISHER) see especially page 2, lines 34-45	10
X	EP 0199993 A1 (LUCAS)	1-4,7,9
X	US 4655329 (KANEKO)	1-4,7-9

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- 7 -

Category	Identity of document and relevant passages	Relevant to claim(s)

**Categories of documents**

**X:** Document indicating lack of novelty or of inventive step.

**Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.

**A:** Document indicating technological background and/or state of the art.

**P:** Document published on or after the declared priority date but before the filing date of the present application.

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**&:** Member of the same patent family, corresponding document.

**Databases:** The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).