UNIVERSAL WATERPROOF ELASTIC DEVICE FOR PROTECTING SUITCASES OF DIFFERENT SIZES HAVING INVIOLABLE AND CUSTOMIZABLE CLOSURE SEALS

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ABSTRACT
It is a universal, waterproof, elastic device to protect suitcases of different sizes with inviolable and customisable seal fasteners, said device consisting of an extremely elastic, water-proof cover, resistant to abrasions which has at least one opening for inserting suitcases, equipped with customisable, inviolable seal fasteners. The cover is of smaller dimensions than those of the suitcases to adapt thereto due to its elasticity in all directions.
UNIVERSAL WATERPROOF ELASTIC DEVICE FOR PROTECTING SUITCASES OF DIFFERENT SIZES HAVING INVOLVABLE AND CUSTOMIZABLE CLOSURE SEALS

OBJECT OF THE INVENTION

[0001] The main object of the present invention is a device for protecting a suitcase, the main purpose of which is to prevent it from being opened by unauthorised persons, in addition to protecting it from abrasion during handling in airports and similar facilities.

[0002] The device is elastic, waterproof and universal and protects suitcases of different sizes by means of a very elastic, waterproof and abrasion-resistant cover having an aperture for introducing the suitcase and customisable involvable closure seals. The dimensions of the cover are smaller than those of the suitcase in order to adjust thereover due to its elasticity in all directions.

BACKGROUND OF THE INVENTION

[0003] Suitcases, during handling thereof at airports or similar facilities, are known to be subject to abrasion and other damage. In order to overcome this drawback, there is a tendency to manufacture increasingly resistant suitcases, although are also heavier and more expensive.

[0004] Additionally, during check-in, loading and unloading of suitcases at these facilities, unauthorised persons may occasionally access and even steal their content.

[0005] In order to avoid this, there is an increasing tendency to wrap suitcases in plastic film, although this is a troublesome task that does not provide effective protection against abrasions and requires a specific machine. It also gives an impression of deterioration and the wrapping is not reusable.

DESCRIPTION OF THE INVENTION

[0006] The device of the invention has an optimum constitution for protecting a suitcase against abrasion and improper aperture.

[0007] In accordance with the invention, the device comprises a highly elastic, waterproof and abrasion-resistant cover having, at least, one aperture for introducing the suitcase.

[0008] Additionally, the aperture is closed with the collaboration of involvable and customisable seals in such a manner that these must be broken in order to extract the suitcase from the cover, given the possibility of customising the seals, which can be materialised by means of embossing, tampography, etc.

[0009] The cover has windows for the passage of the wheels and handles of the suitcase.

[0010] The dimensions of the cover format are smaller than those of a small suitcase. Given the high elasticity of the cover material, it will adapt like a glove to any suitcase of any shape and size, protecting it against abrasion and improper handling. The elasticity of the material chosen to manufacture the cover will be sufficient to allow it to stretch to, at least, double its surface area.

[0011] The cover may be manufactured in different materials. For example, these may be selected from among the following:

- polyamide,
- elastan,
- polyurethane.

[0015] On the other hand, the cover has been envisaged to have pockets for storing documentation, such as tickets or passports.

PREFERRED EMBODIMENT OF THE INVENTION

[0016] In order to complement this description and with the object of helping to better understand the characteristics of the invention, according to a preferred example of practical embodiment thereof, a set of drawings has been included as an integral part of said description, wherein the following have been represented in an illustrative and non-limiting manner:

[0017] FIGS. 1 and 2 show front and rear views of the cover that constitutes the device of the invention;

[0018] FIGS. 3 and 4 show front and rear views of a suitcase protected by the device of the invention; and

[0019] FIGS. 5 to 7 show an exploded view of a template wherewith the cover of the device of the invention may be manufactured.

[0020] The device (1) for protecting a suitcase of the invention comprises a highly elastic cover (2), waterproof and abrasion resistant, having at least one aperture (3) for introducing the suitcase (4). Said aperture (3) is closed with the collaboration of involvable seals (5) and preferably by means of a flap (30) whereon said customisable involvable seals (5) are implemented.

[0021] The cover (2) has windows (6, 6a, 6b, 6c) to allow the passage of the wheels (7, 7a) and handles (8, 8a) of the suitcase (4).

[0022] One of the windows (6a) is disposed in positional correspondence with some of the lateral handles (8a) of the suitcase (4). The airport identification labels (11) are tied to these handles (8a). A small flap (9) with a closure (10) is disposed on said window (6a), said window (6a) being substantially more elongated than the small flap (9) in order to allow the passage of the handle (8a) ends, while the rest of the window is protected by the small flap (9).

[0023] Another of the windows (6c) is disposed in positional correspondence with the rear wheels (7) of the suitcase and is larger in size in order to adapt to the passage of suitcases with two, three or more rear wheels (7), and to the different positions that it can adopt. Given the size of this window (6c), wherethrough the suitcase may be extracted from the cover, non-elastic straps (35) that relate its opposing edges have been envisaged, which cross it and prevent extraction of the suitcase (4).

[0024] Another of the windows (6b) is disposed in positional correspondence with the front wheels (7a) of the suitcase, if any.

[0025] Finally, another of the windows (6) is disposed in positional correspondence with the extractable rear handle (8) of the suitcase (4), which is used to pull the suitcase by rolling it on its rear wheels (7).

[0026] The elasticity of the cover allows it to be stretched to at least double its surface area. It may consist of one or more materials selected from among the following:

- polyamide,
- elastan,
- polyurethane.
[0030] By way of example, a multilayered cover that comprises these three materials, regardless of the number or arrangement of the layers, may be elastically stretched to 100%–150% of its surface area when idle. It can also be repeatedly used until finally discarded.

[0031] On the other hand, the inviolable seals (5) comprise bushings (12) wherethrough breakable pins (13) may advance without possibility of moving backwards. The bushings are fixed at the delimitation of the aperture (3) in opposition to each other for receiving the pins. In the example represented in the figures there is a flap (30) that closes the aperture (3), due to which in this case the bushings are fixed on the edge thereof and on the zone of the cover that remains adjacent to the flap (30) when it closes. As it is not possible for the breakable pins (13) to move back through the bushings (12), it will be necessary to break them to open the cover, thereby evidencing any manipulation of the suitcase (4).

[0032] According to this example of embodiment of the invention, in no case non-limiting, the cover (2) may be constituted based on a template composed of three parts that are sewn together: a perimeter sealing part (14), a front lid (15) and another rear lid (16).

[0033] The perimeter seal part (14) has a considerably oblong shape in general, with an intermediate narrowed zone (17) displaced towards one of its end zones that defines a main cutout (18) corresponding to the window (6c) and, stemming from the opposite part of said main cutout (18), a T-shaped extension (19) that defines the flap (30) and lateral cutouts (20) that define the windows (6b). Cutouts are implemented at the end zones (21, 22, 23) that define the windows (6, 6a) destined for the passage of the handles (8, 8a). Some of these cutouts implement the small flaps (9) and their closures (10) corresponding to the windows (6a).

[0034] The rear lid (16) has a general rectangular shape, with an end cutout (24) in positional correspondence with another lateral cutout (21) of the perimeter seal part (14) that collaborates in the definition of the window (6). It also has another opposed end cutout (24) in positional correspondence with the main cutout (18) of the perimeter seal part (14) that collaborates in the definition of the window (6c).

[0035] On the other hand, the front lid (15) is generally rectangular in shape and implements the inviolable seals (5) complementarily with the flap (30).

1. Device (1) for protecting a suitcase (4), preferably having wheels (7, 7a) and handles (8, 8a), that comprises a waterproof and abrasion-resistant cover (2) having an aperture (3) wherethrough the suitcase is introduced (4), characterized in that the dimensions of the cover (2) are smaller than those of a small suitcase (4) and it is sufficiently elastic to be stretched to at least double its surface area for adapting to a suitcase of any shape and size; likewise, the cover (2) includes inviolable security seals (5) that establish the inviolable closure (5) of the cover (2) around the suitcase (4).

2. Device (1) for protecting a suitcase (4), according to claim 1, characterized in that the cover (2) has a flap (30) that closes the aperture (3) once the cover (2) is fitted over the suitcase (4) and the security seals (5) are defined on a flap (30) and near the aperture (3), establishing the inviolable closure (5) of the cover (2) around the suitcase (4).

3. Device (1) for protecting a suitcase, according to claim 1, characterized in that the cover (2) has windows (6, 6a, 6b, 6c) to allow passage of the wheels (7, 7a) and handles (8, 8a) of the suitcase (4).

4. Device (1) for protecting a suitcase, according to claim 3, characterized in that at least one of the windows (6a) is disposed in positional correspondence with some of the lateral handles (8a) of the suitcase (4) destined for receiving the airport identification labels (11) and has a small flap (9) with a closure (10), said window (6a) being substantially more elongated than the small flap (9) in order to allow room for the handle (8a) ends.

5. Device (1) for protecting a suitcase, according to claim 3, characterized in that another of the windows (6b) is disposed in positional correspondence with the rear wheels (7) of the suitcase and is larger in size in order to adapt to suitcases with two, three or more rear wheels (7); said window (6b) including non-elastic straps (35) that relate their opposing edges to avoid extraction of the suitcase (4) therethrough.

6. Device (1) for protecting a suitcase, according to claim 3, characterized in that another of the windows (6b) is disposed in positional correspondence with the front wheels (7a) of the suitcase.

7. Device (1) for protecting a suitcase, according to claim 3, characterized in that another of the windows (6) is disposed in positional correspondence with the extractable rear handle (8) of the suitcase (4).

8. Device (1) for protecting a suitcase, according to claim 1, characterized in that the cover (2) consists of one or more materials selected from the group consisting of: polyamide, elastin, and polyurethane.

9. Device (1) for protecting a suitcase, according to claim 2, characterized in that the security seals (5) comprise bushings (12) that are fixable on the delimitation of the aperture (3) and on the flap (30), destined for remaining opposed on closing the cover (2), and breakable pins (13) that advance without possibility of moving back through said bushings (12).

10. Device (1) for protecting a suitcase, according to claim 3, characterized in that the cover (2) is constituted based on a template composed of three parts that are sewn together: a perimeter seal part (14), a front lid (15) and another rear lid (16).

11. Device (1) for protecting a suitcase, according to claim 10, characterized in that the perimeter seal part (14) has a considerably oblong shape in general, with an intermediate narrowed zone (17) displaced towards one of its end zones, which define a main cutout (18) corresponding to the window (6c) and, stemming from the opposite part of said main cutout (18), a T-shaped extension (19) that defines the flap (30) and lateral cutouts (20) that define the windows (6b), while cutouts (21, 22, 23) that define the windows (6, 6a) are implemented at its end zones, some of which implement the small flaps (9) and their closures (10).

12. Device (1) for protecting a suitcase, according to claim 11, characterized in that the rear lid (16) has a generally rectangular shape, with an end cutout (24) in positional correspondence with another lateral cutout (21) of the perimeter seal part (14) that collaborates in the definition of the window (6), and another opposed end cutout (24) in positional correspondence with the main cutout (18) of the perimeter seal part (14) that collaborates in the definition of the window (6c).

13. Device (1) for protecting a suitcase, according to claim 3, characterized in that the cover (2) has pockets for storing documentation.

14. Device (1) for protecting a suitcase, according to claim 1, characterized in that the cover (2) is constituted based on a template composed of three parts that are sewn together: a perimeter seal part (14), a front lid (15) and another rear lid (16).