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(54) **ARMBAND CARRIER FOR A PERSONAL MEDIA PLAYER**

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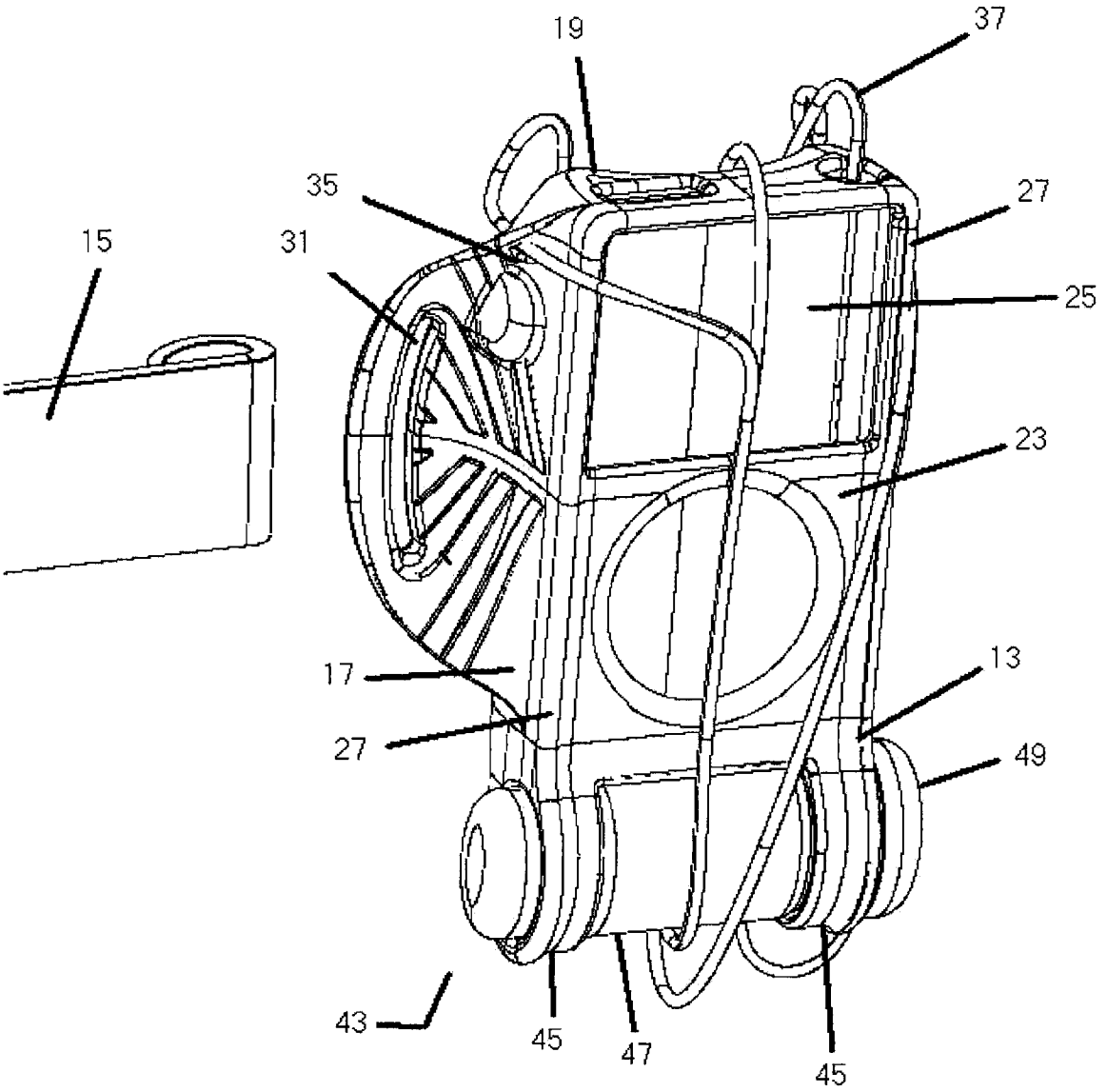
(57) **ABSTRACT**

An armband carrier that includes a casing having a cavity configurable to receive and retain a personal media player, a pair of wings extending laterally and having a slot formed therein, and a strap passing through the slot formed in each wing. An armband carrier that includes a casing having a cavity configurable to receive and retain a personal media player, and a cord management structure at one end of the casing. An armband carrier that includes a casing having a cavity configurable to receive and retain a personal media player, and a storage structure having a re-sealable tube at one end of the casing.



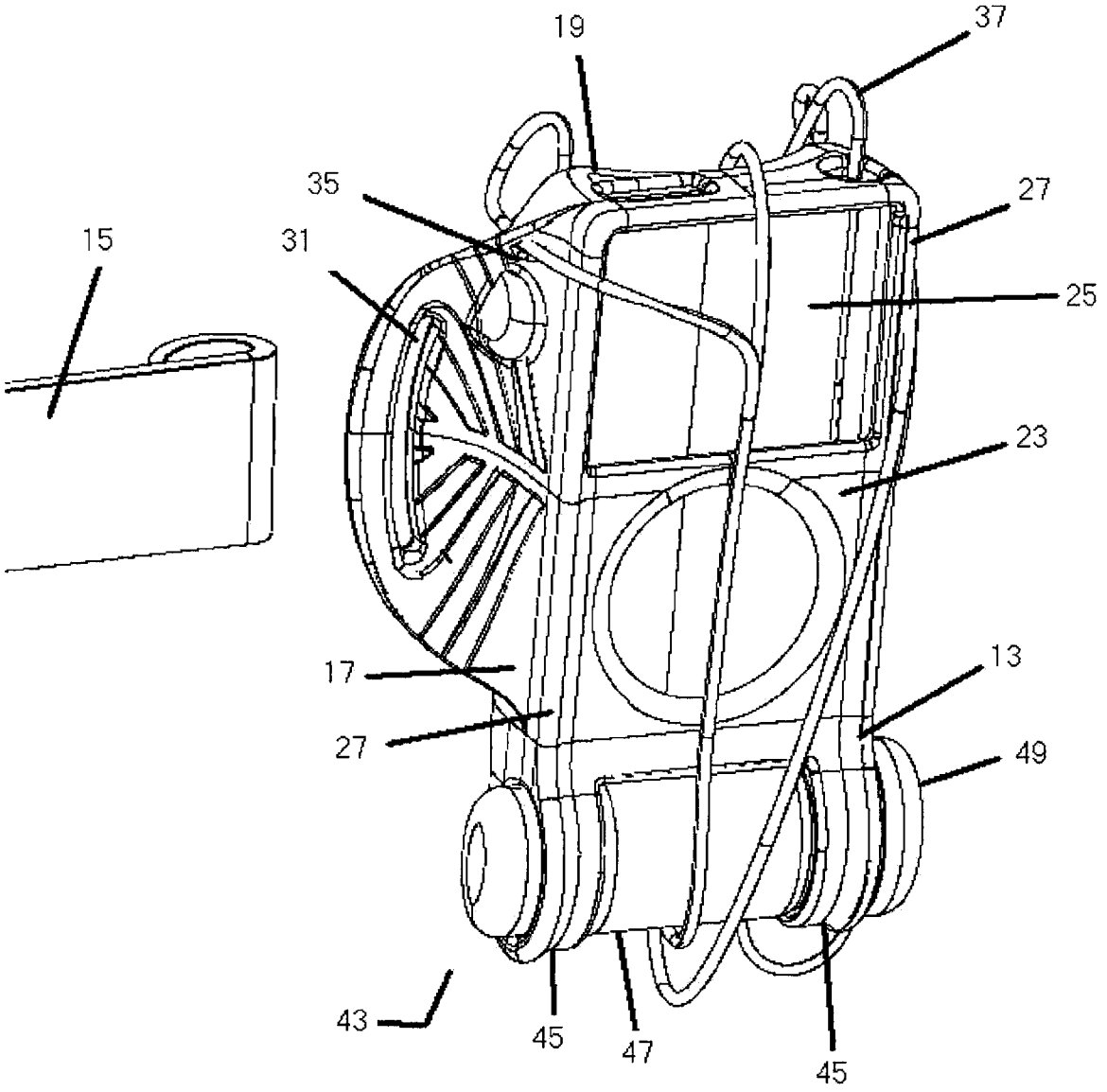


Figure 1

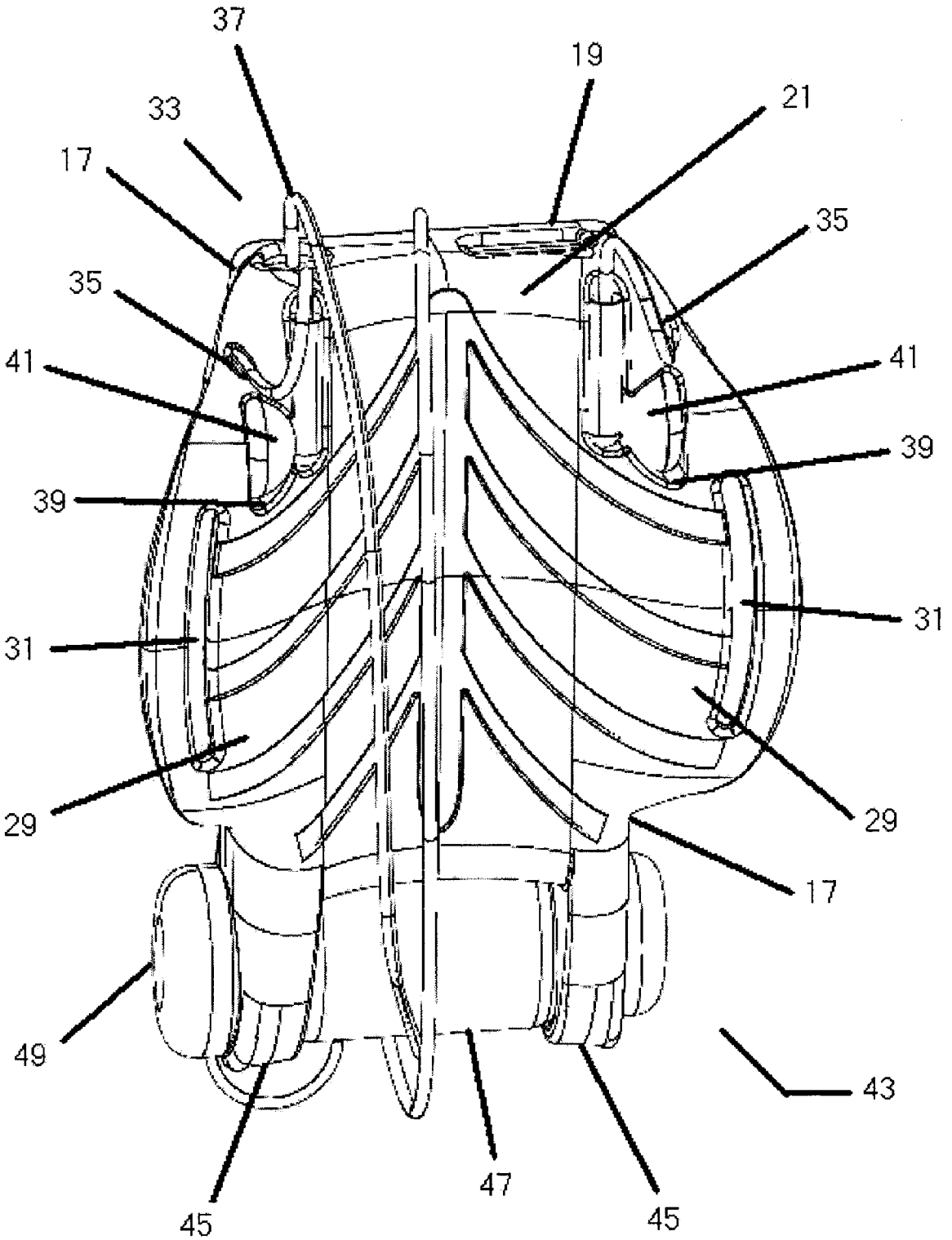


Figure 2

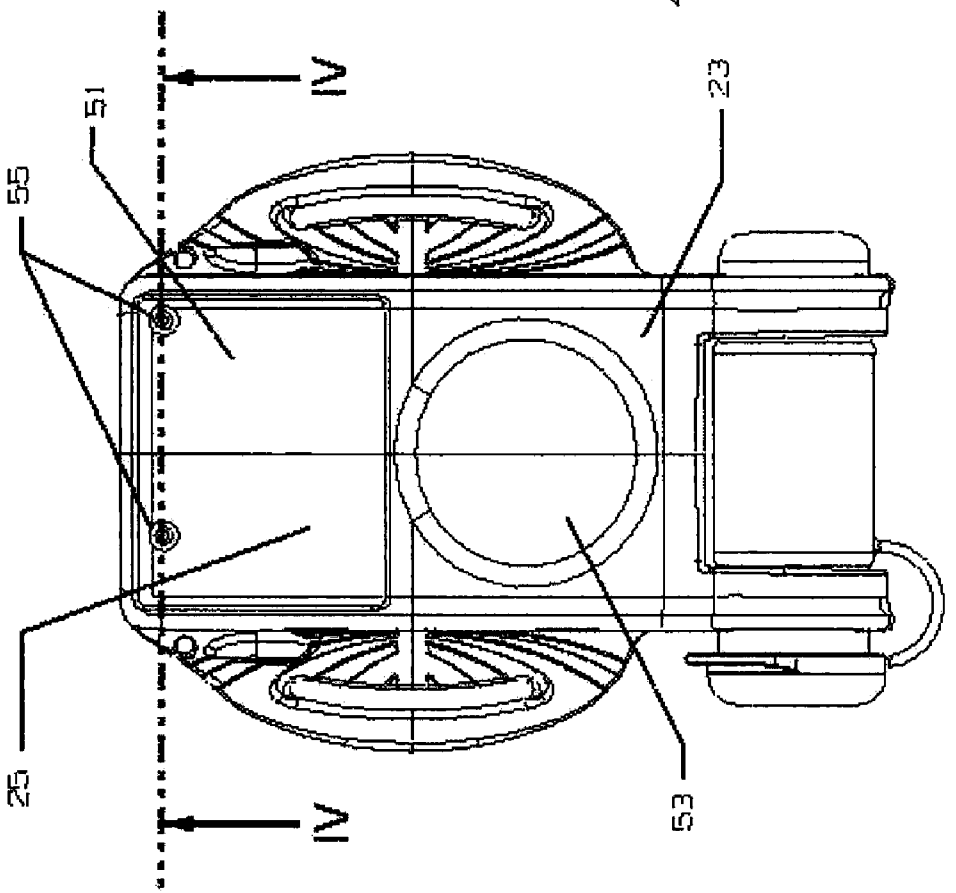


Figure 3

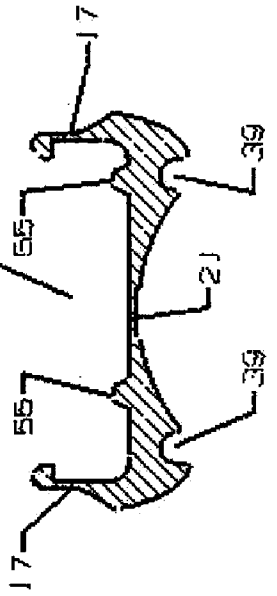


Figure 4

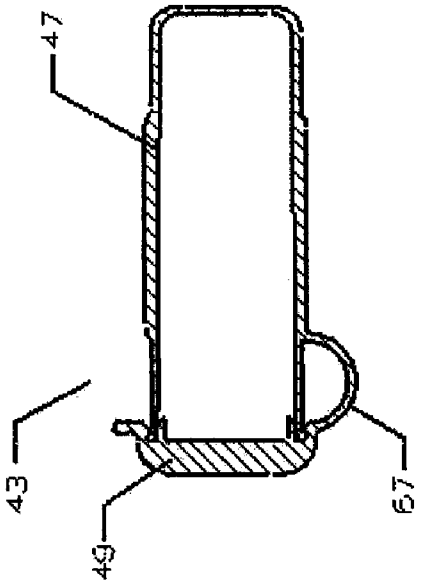


Figure 8

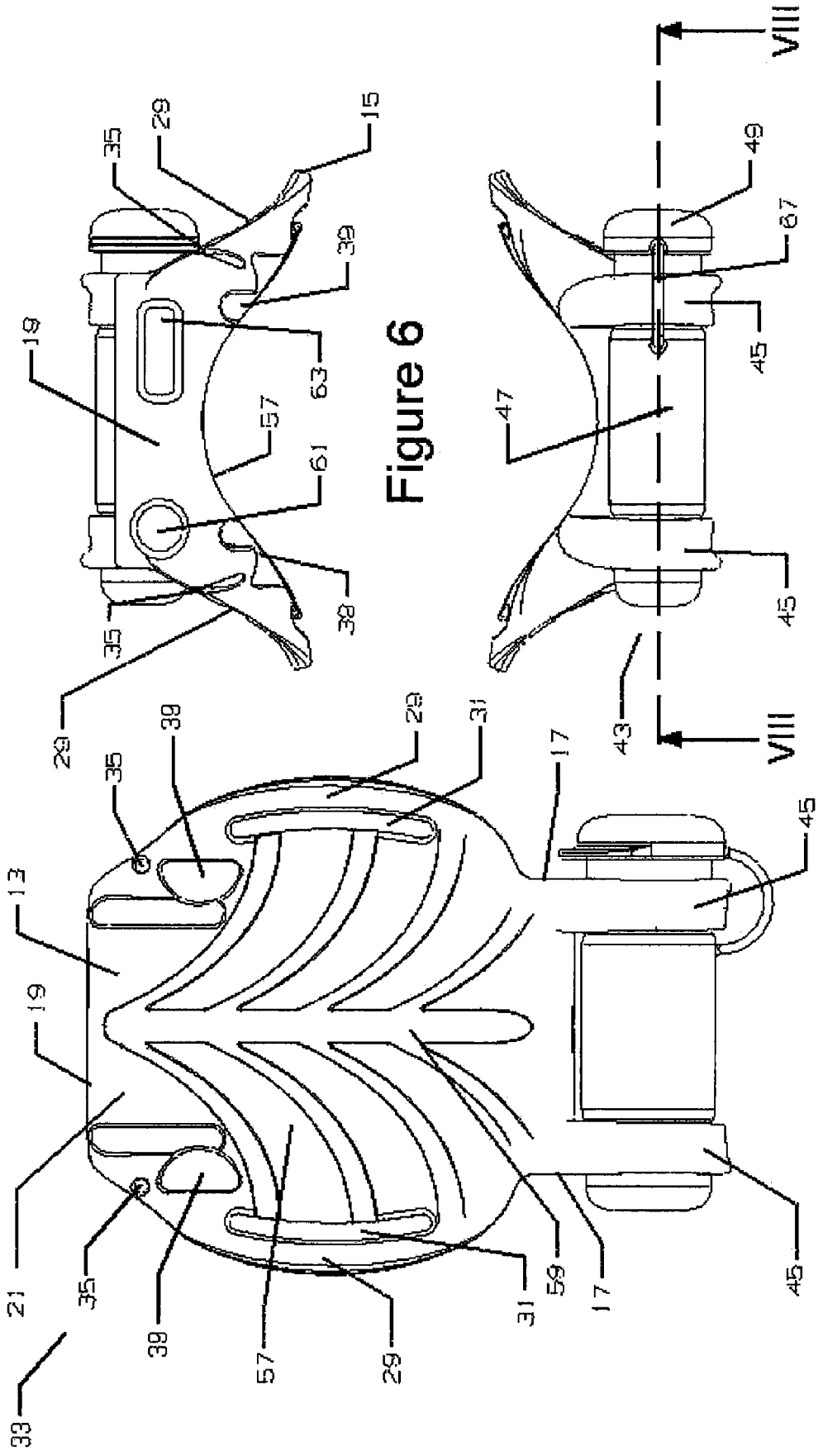


Figure 5

Figure 6

Figure 7

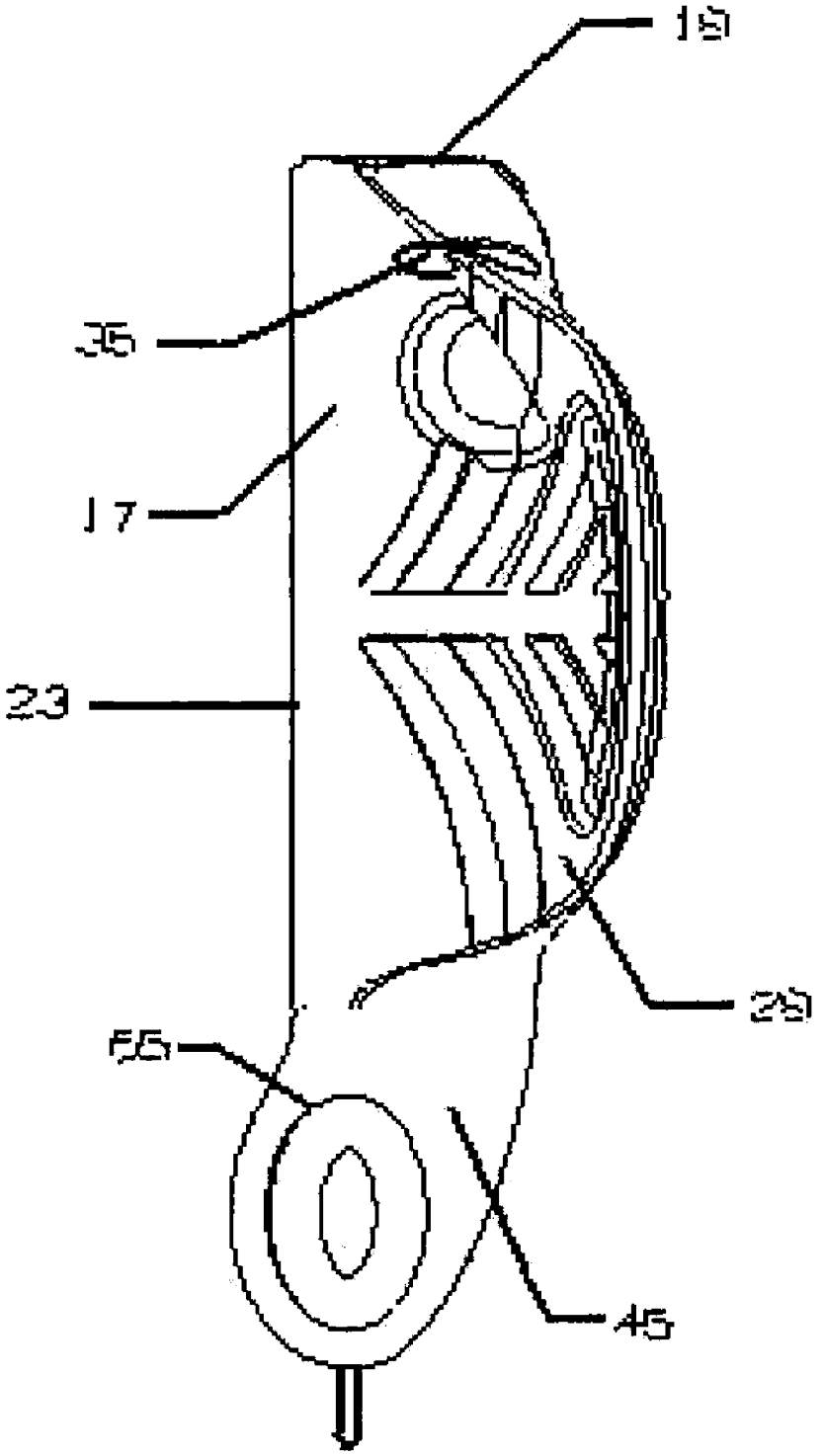


Figure 9

ARMBAND CARRIER FOR A PERSONAL MEDIA PLAYER

BACKGROUND AND SUMMARY

[0001] The present disclosure relates to a carrier for holding a personal media player. More specifically, this invention relates to a device that is secured to the arm of a person for carrying a personal media player.

[0002] Many different types of personal media players exist ranging from portable music and video players to multi-function cellular phones and various combinations in between. Often times, a user of these types of devices is unwilling or unable to hold the device while engaging in various physical activities such as running or exercising or other activities requiring the use of one's hands. These physical activities often require the device to be reliably and comfortably secured to the user. Furthermore, the device may require adjustment of volume or selection of functions while secured to the user. Therefore, a variety of carriers including armband carriers have been utilized to secure these devices to a user.

[0003] In addition, a portable electronic device generally requires accessories such as earphones or earpieces that connect with the device via cords or cables. These cords may interfere with the physical activities of the user by distracting the user or becoming tangled in other equipment, potentially leading to injury to the user or damage to the device. Furthermore, the user may require storage for personal items such as identification cards, money, or keys while engaging in the physical activity. In addition, the user may engage in physical activities in climates including rain or hot weather that may require added protection for the device or the personal items. These physical activities and climates also require that the carrier be durable and tear-resistant.

[0004] In one embodiment of the present invention, the armband carrier includes a casing to hold a personal media player and a pair of wings having slots through which an adjustable armband strap passes. The back of the casing and wings may include a gripping surface to prevent excessive movement while attached to the arm of a user while still providing a soft, comfortable feel against the skin of the user. The carrier may also be configurable to hold devices of various sizes by removing a projection on the casing. The armband strap may be made of a washable, antibacterial/antimicrobial material.

[0005] In another embodiment of the present invention, the armband carrier includes an accessory management structure to secure and store accessories connected to a device held by the carrier. The accessory management structure includes a slot or notch to retain cords and recesses to hold earphones.

[0006] In yet another embodiment of the present invention, the armband carrier includes a storage loop to secure a removable storage tube wherein the user may store personal items such as an identification card, money, keys and the like. The storage tube may include a cap tethered to the tube and configured in combination with the tube to provide a water-resistant closure.

[0007] An armband carrier for a personal media player of the type disclosed herein is advantageous over previous devices by providing improved stability while attached to the arm of a user. Furthermore, the present armband carrier is configurable to allow a user to alter the capacity of the casing and accommodate personal media players of various sizes. The present armband carrier for a personal media player is further advantageous over previous devices by providing accessory management and storage capability for accessories such as earphones that are attached to the device. Providing cord management and storage capability, as well as storage of earphones, decreases the likelihood that a cord will interfere in the user's physical activities, reducing potential for injury to the user and damage to the device. In addition, the present armband carrier is advantageous over previous devices by providing a removable, water-resistant storage tube for identification, money, keys and the like.

[0008] Further areas of applicability will become apparent from the description provided herein. It should be understood that the description and specific embodiment are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.

DRAWINGS

[0009] The drawings described herein are for illustration purposes only and are not intended to limit the scope of the present disclosure in any way.

[0010] FIG. **1** is a perspective view of the armband carrier for a personal media player showing the front face extending away from the user.

[0011] FIG. **2** is a perspective view of the armband carrier showing the back side facing the user.

[0012] FIG. **3** is an elevational view of the armband carrier showing the front face extending away from the user's arm.

[0013] FIG. **4** is a partial cross-sectional view of the armband carrier along line IV of FIG. **3**.

[0014] FIG. **5** is an elevational view of the armband carrier showing the back side facing towards the user's arm.

[0015] FIG. **6** is an elevational view of the armband carrier showing the top including the accessory management structure.

[0016] FIG. **7** is an elevational view of the armband carrier showing the bottom including the storage structure.

[0017] FIG. **8** is a partial cross-sectional view of the armband carrier showing the storage structure along line VII of FIG. **7**.

[0018] FIG. **9** is an elevational view of the armband carrier showing a side wall.

DETAILED DESCRIPTION

[0019] The following description is exemplary in nature and is not intended to limit the scope of the present invention, its application or uses. It should be understood that throughout the drawings, corresponding reference numerals indicate like or corresponding parts and features.

[0020] In FIGS. **1-2**, armband carrier **11** includes a casing **13** and an adjustable armband strap **15** operable to slideably engage with casing **13**. Casing **13** includes a pair of sidewalls **17**, a top wall **19**, a back wall **21**, and a front wall **23** forming a cavity **25** to receive and retain a personal media player (not shown). Along the edges of casing **13** is a bead **27** to increase the strength of the structure and to resist tearing. A pair of wings **29** laterally extends from the casing **13**, with each wing **29** including a slot **31** passing therethrough to receive and slideably engage the armband strap **15**.

[0021] Increased thickness of the wings **29** at the edges and around slots **31** is provided to improve resistance to tearing. A hardened plastic insert (not show) may also be molded into wings **29** around the slots **31** to provide additional reinforcement and resistance to tearing. At one end of casing **13**, an

accessory management structure **33** includes notches **35** to receive and retain an accessory cord **37**. In addition, the accessory management structure **33** includes a pair of recessed portions **39** forming pockets in the shape of ear buds or earphones to receive and retain a pair of earphones **41**. At another end of casing **13**, a storage structure **43** includes a pair of storage loops **45**, a storage tube **47**, and a tethered cap **49**.

[0022] The casing **13**, wings **29** and storage loops **45** are formed as a unitary structure to provide an integral support for a personal media player. As presently preferred, this unitary structure is a molded plastic or polymeric part, and more preferably a molded thermoplastic polyurethane elastomeric part. Thus, one skilled in the art will recognize that conventional molding techniques can be employed to fabricate this structure from Pellethane™ available from Dow Chemical Co. The armband strap **15** is formed from a suitable elastic band that is securable upon itself to provide an adjustable length to accommodate a wide range of arm sizes. The armband should have sufficient elastic memory to stretch and return with the flexion of the user's muscles. As presently preferred, elastic or neoprene bands are suitable, and a flexible strap composed of VELSTRETCH® with an antibacterial/antimicrobial agent applied is most preferred.

[0023] FIGS. **3-4** show armband carrier **11** without a personal media player disposed within the cavity. Front wall **23** includes a first aperture **51** and a second aperture **53** to allow viewing of a display on the personal media player and access to the controls of the personal media player. Apertures **51** and **53** may also be points of entry when placing the personal media player in the armband carrier **11**. Severable projections **55** on an interior surface of back wall **21** are seen through aperture **51** and extend from the interior surface of back wall **21**. By removing projections **55**, the capacity of cavity **25** may be increased to accommodate a larger dimensioned personal media player. For example, projections **55** may be severed from back wall **21** by a sharp knife, wire cutters or even nail clippers.

[0024] As presently illustrated, armband carrier **11** is configured for an Apple iPod®, GenV personal media player. For example, the armband carrier with the projection is sized to secure a 30 GB iPod® and having a thickness of about 11 mm, and the armband carrier without the projection is sized to secure an 80 GB iPod® having a thickness of about 14 mm. However, one skilled in the art will recognize that the teachings of the present invention have applicability to a wide range of personal hand held devices including other models of the Apple iPod® personal media player or personal audio devices of other manufacturers, personal digital assistants, mobile phones and the like.

[0025] In FIG. **5**, the accessory management structure **33** is shown more clearly having notches **35** formed in wings **29** of casing **13** near the top wall **19** to provide a storage location for accessory cord **37**. Accessory cord **37** may be wound around the notches **35** or attached in another fashion by inserting accessory cord **37** into notches **35**. Notches **35** are flexible and operable to receive accessory cords **37** of various sizes. The recessed portions **39** are also more clearly seen near the notches **35**. Furthermore, back wall **21** and wings **29** form a contoured surface **57** which includes recessed grips **59**. Contoured surface **57** may flex to fit a user's arm by tightening or loosening adjustable armband strap **15**. FIG. **6** shows a top view of the carrier **11** wherein the contoured surface **57** is more clearly seen. In addition, an audio jack aperture **61** and a control aperture **63** are located in the top wall **19** to allow the user to plug the accessory cord **37** into the device and operate the device as needed.

[0026] FIGS. **7-9** more clearly depict the storage structure **43** of casing **13**. Elastic storage loops **45** extend from sidewalls **17** and include aperture **65** operable to slideably receive and retain storage tube **47**. Sealed cap **49** forms a water-resistant enclosure once engaged with storage tube **47**, within which a user may enclose an identification card, money, keys, or other items. To prevent losing cap **49**, flexible strap **67** connects cap **49** to storage tube **47**. As presently preferred, the storage tube **47** and cap **49** are configured with an elliptical cross-section wherein the major axis is dismissed to accommodate a quarter-sized object.

[0027] Those skilled in the art can now appreciate from the foregoing description that the broad teachings of the disclosure can be implemented in a variety of forms. Therefore, while this disclosure includes particular examples, the true scope of the disclosure should not be so limited since other modifications will become apparent to the skilled practitioner upon a study of the drawings, the specification, and the following claims.

The invention claimed is:

1. An armband carrier for a personal media player comprising:

a casing having a back wall and at least one side wall extending from the back wall to define a generally rectangular cavity, the casing configurable to receive and retain a personal media player;

a pair of wings extending laterally from the casing with each pair of wings having a slot formed therein; and

a strap passing through the slot formed in each pair of wings and adjustably secured to the wings.

2. The armband carrier of claim **1** wherein the casing further comprises a bead formed on the edge of the side wall opposite the back wall.

3. The armband carrier of claim **1** wherein the casing further comprises a front wall extending from the at least one side wall and generally parallel to the back wall.

4. The armband carrier of claim **1** wherein the at least one side wall includes at least one aperture extending therethrough.

5. The armband carrier of claim **3** wherein the front wall includes at least one aperture extending therethrough.

6. The armband carrier of claim **1** wherein the back wall includes at least one severable projection.

7. The armband carrier of claim **6** wherein the at least one severable projection is configurable to increase the capacity of the cavity.

8. The armband carrier of claim **1** wherein a surface of the back wall opposite the rectangular cavity and a surface of each pair of wings form a contoured surface.

9. The armband carrier of claim **8** wherein the contoured surface includes a recessed area formed therein which defines a gripping surface.

10. The armband carrier of claim **1** further comprising an accessory management structure at an end of the casing.

11. The armband carrier of claim **10** wherein the accessory management structure includes at least one retaining notch operable to receive and retain an accessory cord.

12. The armband carrier of claim **10** wherein the accessory management structure includes a pocket operable to receive and retain a pair of earphones.

13. The armband carrier of claim **10** wherein the accessory management structure further comprises a pair of recessed portions formed therein, each recessed portion shaped in the form of an earphone.

14. The armband carrier of claim **1** further comprising a storage loop at an end of the casing.

15. The armband carrier of claim **14** wherein the storage loop comprises a pair of elastic loops extending from the casing and arranged in a spaced relation.

16. The armband carrier of claim **14** further comprising a storage tube including a tubular body and a removable cap disposed within the storage loop.

17. The armband carrier of claim **16** further comprising an identification card stored in the storage structure, the identification card configured to include information selected from the group of information including name, address, telephone number, emergency contacts, medical history, allergies, and birth date.

18. The armband carrier of claim **16** wherein the removable cap is coupled to the tubular body with a flexible strap.

19. The armband of claim **1** wherein the wings include a hardened plastic insert around the slots for reinforcement.

20. The armband carrier of claim **1** wherein the casing is configured to receive and retain an iPod®-brand personal media player.

21. The armband carrier of claim **1** wherein the casing and wings are a unitary molded part.

22. The armband carrier of claim **1** wherein the strap is treated with a solution containing an antibacterial/antimicrobial agent.

23. An armband for carrying a personal media player comprising:

a casing having a back wall and at least one side wall extending from the back wall forming a generally rectangular cavity, the cavity operable to receive and retain a personal media player;

a pair of wings extending laterally from the casing with each wing having a slot formed therein;

a strap passing through the slot formed in each wing and adjustably secured to the wings; and

a cord management structure at one end of the casing including a slot operable to receive and retain an accessory cord.

24. The armband of claim **23** wherein the cord management structure includes a pocket operable to receive and retain a pair of earphones.

25. The armband of claim **23** wherein the cord management structure further comprises a pair of recessed portions formed therein, each of the pair of recessed portions shaped in the form of an earphone.

26. The armband of claim **23** further comprising a storage loop including a pair of elastic bands extending from an end of the casing opposite the cord management structure and arranged in a spaced relation.

27. An armband for carrying a personal media player comprising:

a casing having a back wall and at least one side wall extending from the back wall forming a generally rectangular cavity, the cavity operable to receive and retain a personal media player;

a pair of wings extending laterally from the casing with each wing having a slot formed therein;

a strap passing through the slot formed in each wing and adjustably secured to the wings; and

a storage structure including a pair of elastic bands extending from an end of the casing and arranged in a spaced relation.

28. The armband of claim **27** further comprising a storage tube including a tubular body and a removable cap disposed within the storage loop.

29. The armband of claim **28** further comprising an identification card stored in the storage structure, the identification card configured to include information selected from the group of information including name, address, telephone number, emergency contacts, medical history, allergies, and birth date.

30. The armband of claim **27** further comprising an accessory storage structure extending from an end of the casing and operable to receive and retain an accessory cord and earphones.

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