Anchor member and method of use

An anchor member (10, 110, 210) configured to mate with a connector (60) is provided. The anchor member (10, 110, 210) may be coupled with a length of material (40) configured to be worn by an animal. The connector (60) may be coupled with an elongated length of material (50).
ANCHOR MEMBER AND METHOD OF USE

This application claims priority to and the benefit of U.S. Provisional Patent Application Number 60/959,228, filed 12 July 2007, the disclosure of which is now expressly incorporated herein by reference.

Field Of The Invention:

[0001] The present invention relates generally to anchor members, and more specifically to an anchor member for use with a length of material such as for example a web.

BACKGROUND AND SUMMARY OF THE INVENTION

[0002] This invention relates generally to an anchor member that can couple with a coupling device or connector. It is known to incorporate anchor members into restraint systems. For example, an anchor member may be incorporated into a collar to be worn by an animal as disclosed for example and without limitation in U.S. Patent No. 6,880,490 to Hanna, the disclosure of which is now incorporated herein by reference. Such anchor members may be configured for coupling to a tether, a web, a rope, a leash or other generally elongated member as disclosed for example and without limitation in Hanna; in U.S. Patent No. 6,367,428 to Forte, the disclosure of which is now incorporated herein by reference; in U.S. Patent No. 5,456,213 to Beauchamp, the disclosure of which is now incorporated herein by reference; and, in commonly owned U.S. Patent Application serial number 10/411,836 filed by Smith et al. on April 11, 2003, the disclosure of which is now expressly incorporated herein by reference. Various connectors, including for example and without limitation snap hooks, clips, and the like may couple with the anchor devices. Other suitable connectors include those in the commonly owned Smith application; in commonly owned U.S. Patent Application serial number 10/206,603 filed by Anthony et al. on 26 July 2002, the disclosure of which is expressly incorporated into this specification by reference; and in commonly owned U.S. Patent Application serial number 10/825,769 filed by Anthony et al. on April 16, 2004, the disclosure of which is now expressly incorporated into this specification by reference. As can be seen in the aforementioned references, such prior anchor members are movably, generally in a swivel manner, incorporated into their respective collars. The movable nature of
these prior anchor members complicates, especially when the collar is being worn and the animal is resisting or otherwise moving, the task of connecting together or disconnecting the anchor member and the leash.

[0003] It is desirable to provide an anchor member that simplifies the mating, connecting and/or engagement, the un-mating, disconnecting and/or disengagement between a connector and an anchor member. The present invention may comprise one or more of the following features and combinations thereof disclosed in the written description and in the claims appended herein thereto.

[0004] An illustrative anchor member or device is disclosed. The illustrative anchor member comprises an anchor portion and a mounting portion, which are coupled together. Illustratively, the anchor portion and the mounting portion are fixed from movement relative to each other. For example, they may be rigidly coupled together through any suitable means. For example and without limitation, any suitable epoxy, adhesive, glue, cement, or connector, including for example and without limitation nails, screws, brackets, rivets, staples and the like may connect or join together the anchor and mounting portion. They could also be screwed together or welded together. So, too, they may be integrally formed as a single, unitary anchor member or unit by any suitable method including for example and without limitation extrusion, casting, carving, injection molding, stamping, and forming. For example and without limitation, a single piece of material, such as for example a length of wire, could be formed into the anchor member. The anchor member illustratively could be fashioned out of any material suitable to the method of manufacture, including for example and without limitation any metallic, non-metallic, composite, synthetic or natural material. For example and without limitation, the anchor member could be made from plastic, Kevlar, steel, brass, nickel, wood and the like. No matter the material of manufacture, the anchor member could also have a coating, for example, a rubber or plastic coating, over that material of manufacture if desired. The anchor member or device and/or its coating may be any desired color, and may vary in size as desired.

[0005] The anchor portion illustratively defines a mating void or aperture configured to mate with or receive any suitable connector. While the anchor portion may generally have or be an open ended “C”-shape, it may have a closed generally “D”-shaped configuration, or it may be formed in any desirable shape and may have an open or a closed end generally adjacent to the mounting portion. The mounting
portion and the anchor portion are generally fixed from movement relative to each other. In addition, the mounting portion and the anchor portion lie in different planes. The mounting portion generally comprises a frame defining at least two mounting apertures or voids. These voids illustratively may be generally parallel to each other and spaced apart. The two voids generally may but need not be co-planar. They may be configured to receive therethrough an elongated piece of material in order to couple or mount together the anchor member and the elongated piece of material. The elongated piece of material illustratively follows a generally serpentine path through the voids. The voids may have any shape suitable for receiving and retaining the elongated piece of material. The anchor member generally and wholly or alternatively may resist movement, may hold fast to or be fixed from movement, may move, or may freely move relative to the longitudinal length of the elongated piece of material. The movement illustratively may be a sliding movement along the longitudinal length of the material. The frame may define an access opening, for example a slot, in each of the at least two voids. The elongated piece of material may be received through the slots into the respective void. It will be appreciated that additional apertures or voids could be defined by the mounting portion frame as desired. The elongated piece of material illustratively could comprise any suitable metallic, non-metallic, composite, natural or synthetic material or combination thereof, such as for example and without limitation nylon, hemp, leather, plastic, steel, brass, rubber and the like. It could be in the form of a rope, a web belt, a chain and the like and illustratively could be a collar to be worn by an animal such as for example and without limitation a canine, a feline, an ovine, a bovine, an equine, a goat, a reptile, or other animal, including a human. The piece of material may be formed into a collar, a halter, a harness, a bracelet, a shackle or other desired structure for wear by an animal as a restraint or anchor member and the like. The anchor member may be configured to couple with a restraint such as for example a leash, and/or it may couple with for example and without limitation any other desirable item such as a bell, an identification tag, a bag, a kit, and the like. The anchor portion may be configured to couple, mate or engage with any suitable connector as further described herein. Such connector may be coupled or connected to an elongated member. The elongated member may comprise for example and without limitation any suitable metallic, non-metallic, composite, natural or synthetic material or combination thereof, such as for example and without
limitation nylon, hemp, leather, plastic, steel, brass, rubber and the like. It could be in the form of a length of rope, web or webbing, or chain and the like and illustratively could comprise a leash, a tether, a lead, a halter, a harness and the like as desired. Illustratively the elongated member is flexible or semi-flexible and it could be connected with the connector in any suitable manner, such as for example and without limitation sewing, gluing, melting, cementing, tacking, riveting, snapping, hook and pile, and the like. Suitable connectors include for example and without limitation snap hooks, clips, spring loaded connectors, spring loaded levers, and the like. Illustratively, each of the elongated piece of material and the elongated member may have any suitable and desired thickness, length, and width including for example and without limitation all standard thicknesses, lengths and widths known to those skilled in the art(s) for which the anchor member will be used. An illustrative method of providing an anchor member and of restraining an animal is also disclosed. Illustratively, the method comprises the steps of coupling or mounting together the elongated piece of material and the anchor member. The elongated piece of material may be fitted or placed on an animal. The elongated member coupled to a connector may be integrated, connected, coupled, mated or engaged together with the anchor member.

[0006] These and other aspects of the present invention will become more apparent from the following description of the illustrative embodiment.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a perspective view of an illustrative anchor member.

[0008] FIG. 2 is a perspective view of another illustrative anchor member.

[0009] FIG. 3 is a perspective view of another illustrative anchor member.

[0010] FIG. 4 is a perspective view of an illustrative anchor member and a length of material mounted together.

[0011] FIG. 5 is a perspective view of an illustrative anchor member and a length of material mounted together, and the anchor member and a connector, integrated with an elongated member, mated together.

DESCRIPTION OF THE ILLUSTRATIVE EMBODIMENTS
[0012] For the purposes of promoting an understanding of the principles of the invention, reference will now be made to a number of illustrative embodiments illustrated in the drawings and specific language will be used to describe the same.

[0013] Referring to Figures 1-3 illustrative embodiments of an anchor member 10, 110, 210 will be explained. Illustrative embodiments 10, 110, 210 generally comprise an anchor portion 20, 120, 220 and a mounting portion 30, 130, 230. The anchor portion 20, 120, 220 illustratively comprises a frame 21, 121, 221 that illustratively defines a mating void 22, 122, 222. The void 22, 122, 222 illustratively is configured to receive or mate with a portion of a connector such as for example and without limitation the connector 60 shown in Figure 5. In the illustrative embodiments the frame 21, 121, 221 generally approximates a C-shaped form, which, may be closed by a side 223 of the mounting portion as shown in the illustrative embodiment of Figure 3, may be generally closed by one or more sides 123A, 123B of the mounting portion as shown in the illustrative embodiment of Figure 2, or may be generally open ended as shown in the illustrative embodiment of Figure 1. Illustratively, however, even the open ended C-shaped anchor portion 20 may be generally closed off when coupled or mounted together with an elongated piece of material 40 as best seen in Figures 4-5. The anchor portion 20, 120, 220 could approximate other shapes as well. For example and without limitation it could have a generally triangular, square, rectangular, ovate, or other polygonal or truncated polygonal shape as desired.

[0014] Illustratively, the mounting portion 30, 130, 230 generally comprises a frame 31A, 31B, 131A, 131B, 231 that generally defines at least two mounting voids, apertures or slots 33A, 33B, 131A, 131B, 233A, 233B. Illustratively, the two mounting voids 33A, 33B, 131A, 131B, 233A, 233B are spaced apart and generally parallel one to the other. The voids could be in the same general plane, as in the case of the illustrative embodiments depicted in Figures 2 and 3, or, as in the case of the illustrative embodiment depicted in Figure 1, they could extend slightly away from a common plane. In any event, the mounting portion 30, 130, 230 and the anchor portion 20, 120, 220 will not be co-planar. For example, in the case of the illustrative embodiment depicted in Figure 1, the anchor portion 20 and the mounting portion 30 illustratively are essentially perpendicular to one another. Similarly, the anchor portion 120 and the mounting portion 130 of the illustrative embodiment of Figure 2 are substantially perpendicular to one another. In the case of the illustrative
embodiment of Figure 3, the anchor portion 220 and the mounting portion 230 are generally at an oblique angle to one another. It will be appreciated that the mounting portion 30, 130, 230 could comprise additional voids beyond the illustrative pairs 33A, 33B, 131A, 131B, 233A, 233B. So, too, the voids could have elongated shapes with generally curved ends 33A, 33B, 133A, 133B, 233A, 233B or could have any other desirable shape such as for example and without limitation a generally rectangular shape.

Illustratively, when the anchor member 10, 110, 210 and elongated piece of material 40 are coupled or mounted together as shown for example in Figures 4-5, they form another illustrative anchor member or an illustrative anchor system 310. The piece of material may have a longitudinal length. A further anchor member, anchor system or restraint system 410 is formed when an elongated member 50 coupled to or integrated with a connector 60 are engaged, connected, coupled, mated, or mounted with anchor member or system 310 as for example and without limitation is illustratively shown in Figure 5. In any event, connector 60 and anchor portion may be releasably connected, coupled, mated, or mounted together.

It will be appreciated that the elongated piece of material 40 and the anchor member 10, 110, 210 may be coupled or mounted together to form anchor member or system 310 by passing, for example and without limitation as by threading, the material 40 through each of the pair of spaced apart apertures 33A, 33B, 133A, 133B, 233A, 233B as illustratively shown in Figures 4-5. When so mounted, the anchor member 10, 110, 210 generally holds fast to the material 40, and may resist movement, may be fixed from movement, may move, or may freely move relative to the material or web belt 40 along its longitudinal length as desired and as will be described. It will be appreciated that the anchor member may be mounted to alternatively move, resist movement or be fixed from movement relative to the anchor member. Illustratively, the material 40 passes through the apertures and around the frame 31A, 31B, 131A, 131B, 231 in a generally serpentine manner, such that, for example, the material 40 will alternately contact top and bottom portions (or bottom and top portions) of each aperture of the respective frame 31A, 31B, 131A, 131B, 231. For example, referring to Figures 4 and 5, the web 40 proceeds over the outer, relative to the aperture 22, web engaging surface 31B’ of frame 31B downwardly through the aperture 33B, passing across the inner, relative to the aperture 22, web engaging surface 31B” of the frame 31B proceeding across
the open end of void 22 toward frame 31A, passing across the inner, relative to the aperture 22, web engaging surface 31A" of frame 31A, proceeding upwardly through aperture 33A and passing over the outer, relative to the aperture 22, web engaging surface 31A' of frame 31A. Illustratively, each of the outer web engaging surfaces 31A' and 31B' lie in generally the same plane (the "outer plane") at the vicinity of engagement, while each of the inner web engaging surfaces 31A" and 31B" lie in generally the same plane (the "inner plane") at the vicinity of engagement. Referring to Figures 2 and 3, it will be seen that while the just described over, under, under, over serpentine pattern could be used, so, too, an under, over, over, under pattern or path could be used. In either event, the outer and inner planes illustratively are displaced one from another by some degree resulting in a mid portion 40A of the web being displaced either above or below the portions of the web 40 proximate to the outer web engaging surfaces 31A' and 31B' depending on which serpentine pattern is used. Those skilled in the art will recognize that the serpentine route, when the portion of the material 40A between the apertures 33A, 33B, 133A, 133B, 233A, 233B is pulled taut, will provide tension in the material 40 sufficient to hold the anchor member 10, 110, 210 generally in place while in use. It being further recognized, that introducing slack into the portion 40A of the web 40 between the voids 33A, 33B, 133A, 133B, 233A, 233B will allow for relative movement, for example sliding movement, between the anchor member 10, 110, 210 and the web 40.

[0017] It will be appreciated that the frames 31A, 31B, 131A, 131B, 231 could be continuous or they could be discontinuous. If continuous, as for example 31A, 31B and 231, then a free end of the material 40 would illustratively first be threaded through each aperture 33A, 33B, 233A, 233B in the serpentine manner just described. However, each of these frames 31A, 31B, 131A, 131B, 231 illustratively could include an access slot or opening in communication with the void(s) or aperture(s) 33A, 33B, 133A, 133B, 233A, 233B, as known to those skilled in the art, for example and without limitation an access slot 134 in frame 131A and 131B, which would allow the material 40 to be inserted into, threaded or received in the described serpentine manner by the aperture at any desired point along the material 40, even if the material has no free end, as for example if already placed on an animal. For example, the mid portion 40A could be directly threaded into the frame through the access slot 134. Illustratively, a movable cover or guard (not shown) could be
provided on the frame 31A, 31B, 131A, 131B, 231 alternately to open and close any such slot or opening to the apertures 33A, 33B, 133A, 133B, 233A, 233B. In any event, illustratively, the material 40 could be turned sideways with an edge generally perpendicular to the respective aperture 33A, 33B, 133A, 133B, 233A, 233B in order to be received therein and then turned so that the material 40 is oriented such that its width generally runs from side to side within the aperture 33A, 33B, 133A, 133B, 233A, 233B as shown in Figures 4-5. As noted, this would allow the anchor member 10, 110, 210 to be placed anywhere along the length of the material 40. It will further be appreciated that even without a slot, the anchor member 10, 110, 210, once mounted together with the material 40, as for example by threading a free end of the material as previously described, could be moved, as by sliding, along the length of the material 40. Those skilled in the art will appreciate that such movement could be limited as desired. For example, as previously disclosed, the frames 31A, 31B could be angled in order to impart tension on the material 40 such that movement of the anchor member 10 along the material would be resisted and would necessitate alternating the introduction and taking out of slack in the material 40 in order to “inch” or “creep” the anchor member 10 along. Other means of and structures for restricting the movement of the anchor member 10, 110, 210 fall within the scope of the invention. So, too, the anchor member 10, 110, 210, could be completely immobilized if desired. For example, the anchor member 10, 110, 210 and material 40 could be sewn, riveted, nailed, glued, cemented, melted or otherwise fastened together.

Illustratively the anchor portion 20, 120, 220 and the mounting portion 30, 130, 230 are generally fixed from movement relative to one another. The anchor portion 20, 120, 220 and the mounting portion 30, 130, 230 illustratively could be separate components that are rigidly connected together as for example and without limitation by welding, by epoxy, by adhesive, by glue, by cement or the like, or could be connected by a suitable fastener such as for example a screw, a tack, a rivet, a nail, a bracket and the like. So, too, the anchor portion 20, 120, 220 and the mounting portion 30, 130, 230 could be screwed together such as in an illustrative example where the anchor portion 20, 120, 220 has threaded male ends which may be screwed into corresponding threaded female apertures in the frames 31A, 31B, 131A, 131B and 231. It will be appreciated that other suitable means of and
structures for rigidly connecting together the anchor portion 20, 120, 220 and the mounting portion 30, 130, 230 fall within the scope of the invention.

[0019] Rather than being rigidly connected together, anchor portion 20, 120, 220 and the mounting portion 30, 130, 230 could be rigidly formed as a single, integral unit, component or anchor member 10, 110, 210. For example and without limitation, a single piece of material, such as for example a length of wire, could be formed into the anchor member 10, 110, 210. So, too, the anchor member 10, 110, 210 could be extruded, injection molded, cast, carved, stamped or otherwise formed into a single, integral anchor member 10, 110, 210. The anchor member 10, 110, 210 could be fashioned out of any material suitable to the method of manufacture, including for example and without limitation any metallic, non-metallic, composite, synthetic or natural material. For example and without limitation, the anchor member 10, 110, 210 could be made from plastic, Kevlar, steel, brass, nickel, wood and the like. No matter the material of manufacture, the anchor member 10, 110, 210 could also include a protective coating over that material. For example, a rubber or plastic outer coating could be applied. The coating could protect the anchor member from the elements and protect the animal from the anchor member itself. For example, a plastic protective coating would not heat up in the sun to the degree that a bare metallic material would. In addition, the material of manufacture and/or the outer coating could be of any desired color. The elongated piece of material 40 illustratively could comprise any suitable metallic, non-metallic, composite, natural or synthetic material or combination thereof, such as for example and without limitation nylon, hemp, leather, plastic, steel, brass, rubber and the like. It could be in the form of a rope, a web, a chain and the like and illustratively could be a collar to be worn by an animal such as for example and without limitation a canine, a feline, an ovine, a bovine, an equine, a goat, a reptile, or other animal, including a human. The piece of material 40 may be formed into a collar, a halter, a harness, a bracelet, a shackle or other desired structure for wear by an animal as a restraint or anchor member and the like. For example, rather than the anchor system 310 serving as an anchor member for a connector 60 and leash 50 combination, it could provide an anchor member of connecting a bell, an identification tag, a bag, a kit, and the like.

[0020] The elongated member 50 illustratively could comprise any suitable metallic, non-metallic, composite, natural or synthetic material or combination thereof, such as for example and without limitation nylon, hemp, leather, plastic,
steel, brass, rubber and the like. It could be in the form of a length of rope, web or webbing, or chain and the like and illustratively could be a leash, a tether, a lead, a halter, a harness and the like as desired. Illustratively the elongated member 50 is flexible or semi-flexible and it could be connected with the connector 60 in any suitable manner, such as for example and without limitation sewing, gluing, melting, cementing, tacking, riveting, snapping, hook and pile, and the like. The connector 60 may comprise any suitable connector such as for example those disclosed in the references incorporated herein by reference including for example and without limitation snap hooks, clips, spring loaded connector, spring loaded lever, and the like.

[0021] Illustratively, each of the elongated piece of material 40 and the elongated member 50 may have any suitable and desired thickness, length, and width including for example and without limitation all standard thicknesses, lengths and widths known to those skilled in the art.

[0022] An illustrative method of providing an anchor member and of restraining an animal is also disclosed. Illustratively, the method comprises the steps of coupling or mounting together the elongated piece or length of material 40 and the anchor member 10, 110, 210 to form anchor member or system 310; placing the anchor member or system on an animal (not shown); and connecting, coupling, engaging, or mating together the connector 60, integrated or coupled together with the elongated member 50, and the anchor member 10, 110, 210 thereby forming restraint system 410. The restraint system 410 may be disassembled by disconnecting, uncoupling, disengaging, or un-mating the connector 60 and the anchor member 10, 110, 210.

[0023] While the invention has been illustrated and described in detail in the foregoing drawings and description, the same is to be considered as illustrative and not restrictive in character, it being understood that only illustrative embodiments thereof have been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.
What is claimed is:

1. An anchor member comprising:
   an anchor portion; and
   a mounting portion defining at least two mounting voids
   configured to receive therethrough a length of material; and
   the mounting portion and the anchor portion being coupled
   together.

2. The anchor member of claim 1 wherein the mounting portion
   and the anchor portion are integrally formed together.

3. The anchor member of claim 1 wherein the mounting portion
   and the anchor portion are rigidly coupled together.

4. The anchor member of claim 2 or claim 3 wherein the anchor
   portion defines a mating void, and wherein the mating void is
   configured to mate with a connector.

5. The anchor member of claim 4 wherein the length of material
   is thread through the at least two mounting voids in a serpentine
   fashion.

6. The anchor member of claim 4 wherein
   one of the at least two mounting voids comprises:
   a first outer web engaging surface, and
   a first inner web engaging surface, and
   the other of the at least two mounting voids comprises:
   a second outer web engaging surface, and
   a second inner web engaging surface, and
   wherein the length of material is thread over the first web
   engaging surface, through the one void, under the first inner web
   engaging surface, under the second inner web engaging surface,
   through the other void, and over the second outer web engaging
   surface.
7. The anchor member of claim 5 wherein the length of material has a longitudinal length and wherein when the length of material is thread through the mounting voids, the anchor member and the length of material are generally fixed from movement relative to one another along the longitudinal length of the material.

8. The anchor member of claim 5 wherein when the length of material is thread through the mounting voids, the anchor member may move relative to the material.

9. The anchor member of claim 5 wherein the length of material has a longitudinal length and wherein when the length of material is thread through the mounting voids the anchor member alternatively may resist movement relative to and along the longitudinal length of the material and may move relative to and along the longitudinal length of the material.

10. The anchor member of claim 5 wherein the mounting voids are generally co-planar.

11. The anchor member of claim 5 wherein the anchor portion and the mounting portion lie in different planes.

12. The anchor member of claim 11 wherein the anchor portion and the mounting portion lie in planes that are substantially perpendicular to one another.

13. The anchor member of claim 5 wherein the anchor portion is generally "C"-shaped.

14. The anchor member of claim 5 wherein the anchor member comprises a protective coating.

15. The anchor member of claim 5 wherein the anchor portion further comprises an access slot in communication with the mounting voids.
16. The anchor member of claim 2 or claim 3 further comprising a connector coupled to a second length of material, and wherein the anchor portion and the connector are releasably mated together and the first length of material is mounted to an animal.

17. An anchor member comprising:
   an anchor portion defining a mating void configured to mate with a connector; and
   a mounting portion defining a first mounting void comprising a first outer web engaging surface, and a first inner web engaging surface, and a second mounting void comprising a second outer web engaging surface, and a second inner web engaging surface; and
   a length of material; and
   wherein the length of material is thread over the first web engaging surface, through the first mounting void, under the first inner web engaging surface, under the second inner web engaging surface, through the second mounting void, and over the second outer web engaging surface.

18. The anchor member of claim 17 wherein the length of material is configured to mount to an animal.

19. A method of restraining an animal comprising the steps of:
   providing an anchor member comprising an anchor portion having a mating void and a mounting portion defining at least two mounting voids;
   threading through the at least two mounting voids in serpentine fashion a length of material; and
   mounting the length of material on an animal.

20. The method of claim 19 further comprising the step of mating together the anchor portion and a connector.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPCA(8) - A01K 1/06 (2008.04)
USPC - 119/792
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
IPCA(8) - A01K 1/06 (2008.04)
USPC - 119/769, 771, 792, 856, 863, 907

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,613,467 A (ARAKAWA) 25 March 1997 (25.03.1997) entire document</td>
<td>1, 2, 4-10, 13, 17-20</td>
</tr>
<tr>
<td>Y</td>
<td>US 6,745,722 B1 (QUILLING) 08 June 2004 (08.06.2004) entire document</td>
<td>1-16</td>
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<tr>
<td>A</td>
<td>US 5,335,627 A (BANDIMERE) 09 August 1994 (09.08.1994) entire document</td>
<td>1-20</td>
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Further documents are listed in the continuation of Box C.

Special categories of cited documents:

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Date of the actual completion of the international search
02 October 2008

Date of mailing of the international search report
07 OCT 2008

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