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Harness for an animal

Abstract

A harness for an animal has a collar, a sternum cover, a closed loop, and a link connecting an upper section of the collar and the closed loop. The sternum cover extends from the collar to the end of the sternum cover (a sternum-cover end). The right side of the sternum cover has a right extension, and the left side of the sternum cover has a left extension. The right extension is connected to the closed loop and the left extension is connected to the closed loop. The closed loop is made of a flexible material enabling the closed loop to change its shape when pulled or pushed.

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Background/Summary

(1) This Application claims priority of a U.S. patent application Ser. No. 18/207,029 (the “029 Application”) with the filing date of Jun. 7, 2023. The entire content of the '029 Application is hereby incorporated by reference.

SUMMARY

(2) A harness for an animal is presented herein. Various forms of animal restraints for walking pets are available in the market. Some restraints use neck collars and some restraints use harnesses. The neck collars are generally simple but chokes the animal when the restraint is applied. For example, when a leash is attached to the neck collar, the pulling on the leash restrains the animal but the restrain unfortunately chokes the animal. On the other hand, a harness used to wrap around the torso of the animal does not choke the animal, but the harness is fixed in length so the animal is uncomfortable and binding to the animal when the harness is worn.

(3) Therefore, there is a need for a harness for an animal that would loosen the hold around the neck and torso of the animal when not pulled (that is, when a restraint is not applied), but would tighten and securely hold the animal around the torso when pulled (that is, when a restraint is applied.) The harness for an animal described herein solves the problems described above by incorporating a closed loop into the harness that adjusts flexibly to loosen the grip around the torso when not pulled upon and tightens the grip around the torso when pulled upon.

(4) A harness for an animal presented herein has a collar, a sternum cover, a closed loop, and a link connecting an upper section of the collar and the closed loop. The link may be in the form of a strap. In fact, a strap may be a cord, a leather or corded strip or band, a flattened string, denim, fabric, nylon, flexible plastic, string, and other strapping means used in harnesses for animals.

(5) The sternum cover extends from the collar to a sternum-cover end. The right side of the sternum cover has a right extension, and the left side of the sternum cover has a left extension. The right extension is connected to the closed loop and the left extension is connected to the closed loop. The closed loop is made of a flexible material enabling the closed loop to change its shape when pulled or pushed.

(6) The flexible loop is thus able to have a varying loop width and a varying loop height. When a leash attached to the closed loop is not pulled tight, the closed loop is relaxed and the closed loop flattens, making the loop width wider (making the loop height shorter), making the entire harness loosely fit on the animal. When the leash attached to the closed loop is pulled tight, the closed loop is pulled and the closed loop elongates towards the pulling force, making the loop width narrower (making the loop height longer), making the entire harness tightly fit on the animal.

(7) Because the closed loop is relaxed and as the closed loop flattens, making the loop width wider (making the loop height shorter), when the leash is not pulled, the harness is relaxedly fit over the animal and the harness hardly put any binding force on the animal, making the animal comfortable. However, when the leash is pulled, the closed loop is pulled and the closed loop elongates towards the pulling force, making the loop width narrower (making the loop height longer), making the entire harness tightly fit on the animal, pulling on the upper torso above the sternum, on the sternum, or the upper torso below the sternum of the animal, controlling and restraining the animal without choking the animal.

(8) One advantage of the embodiment presented herein is that although the harness has a collar around the neck of the animal, the most of the controlling force of a pull does not choke the animal. Because the pulling force is distributed over the upper torso (or over the sternum), the pulling force is well distributed over the animal's body, minimizing any choking or any of the straps digging into the body of the animal due to the pressure concentrated at any one point.

(9) The right side of the sternum cover and the left side of the sternum cover, from the collar gradually come closer to each other in an unfolded state and then gradually goes further apart in an unfolded state, forming the right extension and the left extension, respectively.

(10) A right tab and a left tab are attached to the closed loop so that the right extension attaches to

the right tab and the left extension attaches to the right tab.
(11) The right tab and the left tab are slidably attached to the closed loop so that either or both the right tab and the left tab slide along the closed loop. The right tab has a right tab opening and the left tab has a left tab opening so that the closed loop is inserted through both the right tab opening and the left tab opening so that either or both the right tab and the left tab easily slide along the closed loop.
(12) To better accommodate the leash, a ring is attached to the link or to the loop so that a leash can be attached to the ring. One embodiment has the link with a hole formed at an end (or at an extremity) of the link, away from the collar and next to the closed loop. A part of the ring is inserted through the hole and the ring is free to rotate about the hole.
(13) Various versions of the harness are available. An embodiment of the harness for an animal has a right strap attached to the right extension and a left strap attached to the left extension. In this embodiment, the right strap attached to the right extension is removably attached to the right tab, and the left strap attached to the left extension is removably attached to the left tab.
(14) An embodiment of the harness for an animal has the right strap with a right buckle used to adjust length of the right strap and the left strap with a left buckle used to adjust length of the left strap. The right buckle and the left buckle are used to adjust the harness to comfortably fit the animal.
(15) A harness for an animal is presented, and it is better described, together with the drawings and detailed description below.

Description

BRIEF DESCRIPTION OF THE DRAWINGS
(1) These and other features, aspects, and advantages of the harness for an animal will become better understood with reference to the accompanying drawings, wherein:
(2) FIG. **1** is an isometric view of the harness for an animal,
(3) FIG. **2** is a top view of the harness for an animal,
(4) FIG. **3** is a rear view of the harness for an animal, and
(5) FIG. **4** is the harness for an animal worn by a pet.
DETAILED DESCRIPTION
(6) As shown in FIGS. **1-4**, a harness **10** for an animal **15** (see FIG. **4**) presented herein has a collar **20**, a sternum cover **25**, a closed loop **30**, and a link **35** connecting an upper section **40** of the collar **20** and the closed loop **30**. The link **35** may be in the form of a strap. In fact, a strap may be a cord, a leather, corded strip, band, a flattened string, denim, fabric, nylon, flexible plastic, string, or other strapping means used in harnesses for animals.
(7) As shown in FIGS. **1-4**, the sternum cover **25** extends from the collar **20** to a sternum-cover end **45**. The right side **50** of the sternum cover **25** has a right extension **55**, and the left side **60** of the sternum cover **25** has a left extension **65**. The right extension **55** is connected to the closed loop **30** and the left extension **65** is also connected to the closed loop **30**. The closed loop **30** is made of a flexible material enabling the closed loop **30** to change its shape when pulled or pushed. Thus, the closed loop **30** may be a closed loop cord, leather, corded strip, band, flattened string, denim, fabric, nylon, flexible plastic, string, or other strong flexible closed loop means used in harnesses for animals.
(8) The flexible closed loop **30** is thus able to have a varying loop width **70** and a varying loop height **75** (both shown in FIG. **3**). When a leash **80** attached to the closed loop is not pulled tight, the closed loop **30** is relaxed and the closed loop **30** flattens, making the loop width **70** wider (making the loop height **75** shorter), making the entire harness **10** loosely fit on the animal **15**. When the leash **80** attached to the closed loop **30** is pulled tight, the closed loop **30** is pulled and

the closed loop **30** elongates towards the pulling force, making the loop width **70** narrower (making the loop height **80** longer), making the entire harness **10** tightly fit on the animal **15**.

(9) Wherein the closed loop has a loop width and a loop height, wherein the loop width runs along a torso line **81** that is perpendicular to a vertebral column **82** of the animal **15**, and wherein the loop width and the loop height are variable pending whether the leash is pulled or is resting so that when a leash attached to the closed loop is not pulled the loop width perpendicular to a vertebral column to loosen the right extension **55** and the left extension **65** around an underside **83** of the animal **15** and when the leash is pulled the loop width **70** decreases perpendicular to a vertebral column to pull the right extension **55**, the sternum cover **25**, and the left extension **65** against and around the underside **83** of the animal **15**.

(10) Because the closed loop **30** is relaxed (at the rest state or when the leash is not pulled) and as the closed loop **30** flattens, making the loop width **70** wider while making the loop height **75** shorter, when the leash **80** is not pulled, the harness **10** is relaxedly fit over the animal **15** and the harness **10** hardly put any binding force on the animal **15**, making the animal **15** comfortable. However, when the leash **80** is pulled, the closed loop **30** is pulled and the closed loop **30** elongates towards (upwards) the pulling force, making the loop width **70** narrower while making the loop height **75** longer, making the entire harness **10** tightly fit on the animal **15**, pulling on the upper torso **85** above the sternum **90**, on the sternum **90**, or the upper torso **85** below the sternum **90** of the animal **15**, controlling and restraining the animal **15** without choking the animal **15**.

(11) One variation to the close loop is that the close loop has a front edge **86** and a rear edge **87** so that the front edge **86** is towards the collar **20** and the front edge **86** is shorter in length than the rear edge **87**, forming a trapezoidal shape **88** when viewed from above the harness when worn by the animal, so that one or both the right tab opening **110** and the left tab opening **115** leans toward the collar **20** to better accommodates the shape of the animal **15**.

(12) One advantage of the embodiment presented herein is that although the harness **10** has a collar **20** around the neck of the animal **15**, most of the controlling force of a pull does not choke the animal **15**. Because the pulling force is distributed over the upper torso **85** (or over the sternum **90**), the pulling force is well distributed over the animal's body, minimizing any choking, minimizing the harness **10** or collar **20** digging into the body of the animal **15** due to the pressure getting concentrated at any one point.

(13) The right side **50** of the sternum cover **25** and the left side **60** of the sternum cover **25**, from the collar **20** gradually come closer to each other in an unfolded state (the sternum cover width narrows) and then gradually goes further apart (the sternum cover width increases) in an unfolded state, forming the right extension **55** and the left extension **65** at the sternum-cover end **45**, respectively.

(14) A right tab **100** and a left tab **105** are attached to the closed loop **30** so that the right extension **55** attaches to the right tab **100** and the left extension **65** attaches to the left tab **105**. The right tab **100** and the left tab **105** are slidably attached to the closed loop **30** so that either or both the right tab **100** and the left tab **105** slide along the closed loop **30**. The right tab **100** has a right tab opening **110** and the left tab **105** has a left tab opening **115** so that the closed loop **30** is inserted through both the right tab opening **110** and the left tab opening **115** so that either or both the right tab **100** and the left tab **105** easily slide along the closed loop **30**.

(15) To better accommodate the leash **80**, a ring **120** is attached to the link **35** or to the loop **30** so that a leash **80** can be attached to the ring **120**. One embodiment has the link **35** with a hole **125** formed at an extremity **130** of the link **35**, away from the collar **20** and next to the closed loop **30**. A part of the ring **120** is inserted through the hole **125** and the ring **120** is free to rotate about the hole **125**. The link **35** may be formed into an upper link **136** and a lower link **137**, having two separate links to potentially have different length for the upper link **136** and the lower link **137**. An example would be the upper link **136** longer than the lower link **137**, forming a gap **138** between the upper link **136** and the lower link **137**.

(16) Various versions of the harness **10** are available. An embodiment of the harness **10** for an animal **15** has a right strap **135** attached to the right extension **55** and a left strap **140** attached to the left extension **65**. In this embodiment, the right strap **135** attached to the right extension **55** may be removably attached to the right tab **100**, and the left strap **140** attached to the left extension **65** is removably attached to the left tab **105**.
(17) An embodiment of the harness **10** for an animal **15** may also have the right strap **135** with a right buckle **145** used to adjust length of the right strap **135** and the left strap **140** with a left buckle **150** used to adjust length of the left strap **140**. The right buckle **145** and the left buckle **150** are used to adjust the size (looseness or tightness) of the harness **10** to comfortably fit the animal **15**.
(18) While the description, drawings, and references have presented, shown, and described with reference to different embodiments thereof, it will be appreciated by those skilled in the art that variations in form, detail, compositions, and operation may be made without departing from the spirit and scope of the disclosure.

Claims

1. A harness for an animal comprising: a collar, a sternum cover, a closed loop, and a link connecting an upper section of the collar and the closed loop, wherein the closed loop has a loop width and a loop height, wherein the loop width runs along a torso line that is perpendicular to a vertebral column of the animal, and wherein the loop width and the loop height are variable pending whether the leash is pulled or is resting so that when a leash attached to the closed loop is not pulled the loop width increases perpendicular to a vertebral column to loosen a right extension and a left extension around an underside of the animal and when the leash is pulled the loop width decreases perpendicular to a vertebral column to pull the right extension, the sternum cover, and the left extension against and around the underside of the animal, wherein the sternum cover extends from the collar to a sternum-cover end, wherein the right extension is attached to a right side of the sternum cover and the right extension is attached to a left side of the sternum cover, wherein the right extension is connected to the closed loop and the left extension is connected to the closed loop, wherein a right tab and a left tab are attached to the closed loop so that the right extension is connected to the closed loop by the right tab and the left extension is connected to the closed loop by the left tab, and wherein either or both the right tab and the left tab are slidably attached to the closed loop to slide along the closed loop.
2. The harness for an animal of claim 1, wherein the right tab has a right tab opening and the left tab has a left tab opening so that the closed loop is inserted through both the right tab opening and the left tab opening so that either or both the right tab and the left tab slide along the closed loop.
3. The harness for an animal of claim 2, wherein a ring is attached to the link or to the closed loop so that a leash can be attached to the ring.
4. The harness for an animal of claim 3, wherein the link has a hole formed at an extremity of the link, away from the collar and next to the closed loop, so the ring is inserted through the hole and the ring is free to rotate about the hole.
5. The harness for an animal of claim 4, wherein the link comprises of an upper link and a lower link and the link covers an entire collar width and an entire closed loop width.
6. The harness for an animal of claim 4, wherein a right strap is attached to the right extension and a left strap is attached to the left extension, wherein the right strap has a right buckle used to adjust length of the right strap and the left strap has a left buckle used to adjust length of the left strap, wherein the link comprises of an upper link and a lower link and the link covers an entire collar width and the entire loop width, and wherein the upper link is longer than the lower link to form a gap between the upper link and the lower link.
7. The harness for an animal of claim 2, wherein the collar is an enclosed circular shape forming an entry for a head of an animal.

8. A harness for an animal comprising: a collar, a sternum cover, a closed loop, and a link connecting an upper section of the collar and the closed loop, wherein the closed loop has a loop width and a loop height, wherein the loop width runs along a torso line that is perpendicular to a vertebral column of the animal, and wherein the loop width and the loop height are variable pending whether the leash is pulled or is resting so that when a leash attached to the closed loop is not pulled the loop width increases perpendicular to a vertebral column to loosen a right extension and a left extension around an underside of the animal and when the leash is pulled the loop width decreases perpendicular to a vertebral column to pull the right extension, the sternum cover, and the left extension against and around the underside of the animal, wherein the closed loop has a front edge and a rear edge, wherein the front edge is towards the collar and the front edge is shorter in length than the rear edge, forming a trapezoidal shape when viewed from above the harness when worn by the animal, so that one or both a right tab opening and a left tab opening leans toward the collar to better accommodate the shape of the animal, wherein the sternum cover extends from the collar to a sternum-cover end, wherein the right extension is attached to a right side of the sternum cover and the right extension is attached to a left side of the sternum cover, wherein the right side of the sternum cover and the left side of the sternum cover, from the collar gradually come closer to each other in an unfolded state and then gradually goes further apart in an unfolded state, forming the right extension and the left extension, respectively, wherein the right extension is connected to the closed loop and the left extension is connected to the closed loop, wherein the closed loop is made of a flexible material enabling the closed loop to change its shape when pulled or pushed, wherein a right tab and a left tab are attached to the closed loop so that the right extension is connected to the closed loop by the right tab and the left extension is connected to the closed loop by the left tab, and wherein either or both the right tab and the left tab are slidably attached to the closed loop to slide along the closed loop.

9. The harness for an animal of claim 8, wherein the right tab has a right tab opening and the left tab has a left tab opening so that the closed loop is inserted through both the right tab opening and the left tab opening so that either or both the right tab and the left tab slide along the closed loop.

10. The harness for an animal of claim 9, wherein a ring is attached to the link or to the closed loop so that a leash can be attached to the ring.

11. The harness for an animal of claim 10, wherein the link has a hole formed at an extremity of the link, away from the collar and next to the closed loop, so the ring is inserted through the hole and the ring is free to rotate about the hole.

12. The harness for an animal of claim 11, wherein the link comprises of an upper link and a lower link and the link covers an entire collar width and an entire closed loop width.

13. The harness for an animal of claim 9, wherein a right strap is attached to the right extension and a left strap is attached to the left extension, wherein the right strap has a right buckle used to adjust length of the right strap and the left strap has a left buckle used to adjust length of the left strap, wherein the link comprises of an upper link and a lower link and the link covers an entire collar width and the entire loop width, and wherein the upper link is longer than the lower link to form a gap between the upper link and the lower link.

14. The harness for an animal of claim 9, wherein the collar is an enclosed circular shape forming an entry for a head of an animal.