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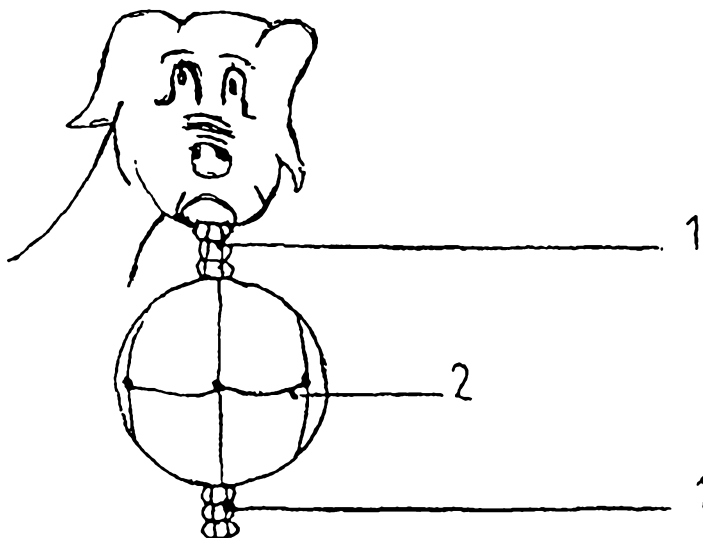
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(54) Title: DEVICE FOR PLAYING BALL WITH A DOG

(54) Titre: DISPOSITIF PERMETTANT DE JOUER AU BALLON AVEC UN CHIEN

(57) Abstract

The invention concerns the field of articles for dogs. Presently, there does not exist a type of ball specially designed for dogs, and yet it is more amusing to play ball with one's dog rather than play ball by oneself. Since the existing types of balls do not have any gripping means, the dog tries to seize it with its mouth by squeezing it thus causing to burst easily. The invention brings a solution to said problem. At least one oblong gripping element (1) is located at the ball periphery with which it is in contact, either indirectly via a covering element (2) enclosing the ball, or directly by extending its external casing, or inner bladder or an element interposed between the two latter elements. Said device has an elastic articulation between the gripping element (1) and the ball, permanently returning the gripping element (1) in a radial position relative to the ball centre. Said invention is of particular interest to manufacturers of articles for dogs.



**Device for playing ball with a dog using a ball**

**Description**

5 This invention relates to the field of items for dogs.  
At the present time, there is no large ball in  
existence for dogs, even though it is far more fun to  
play ball with a dog using a large ball than using a  
small ball. Since none of the current large balls  
10 (footballs, handballs, basketballs, volleyballs, etc.)  
has any grip, the dog tries to grab them in its mouth  
in order to pick them up, and thus very soon punctures  
them. However, for the sport of horse ball there is a  
six-handled net, through the meshes of which a deflated  
15 large ball is introduced to then be reinflated once  
inside. The six tall and broad leather handles  
completely surround the ball, preventing it from  
rolling or bouncing at all, as demanded by that sport,  
for convenience of the riders. These tall and broad  
20 handles, designed to be grasped by a human hand, prove  
entirely unsuitable and dangerous for hoisting the ball  
into the air by kicking it and for being gripped in the  
mouth of a dog. In addition, the fact that this ball  
does not roll or bounce at all removes the entire  
25 interest of playing ball with a dog. Certain large  
balls are sold in a net with two fine handles so that  
they can be more readily transported. As the handles  
are not arranged radially, they cannot be stood up,  
project, and protrude to a marked extent from the outer  
30 cover of the ball. Indeed they rather tend to lie flat  
against the outer cover of the large ball. As a result,  
the dog cannot grip them and therefore tries to grab  
the ball in its mouth in order to pick it up, and thus  
very soon punctures it. Furthermore, an American patent  
35 numbered US 5,265,559 describes a toy for a dog  
consisting of a flexible grip tied to a grip in the  
shape of an arc of a circle which is itself attached to  
a portion of a large ball. As these two grips are not  
elongate, do not have a certain rigidity, do not have a



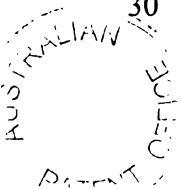
base securely attached to the portion of the ball, do not have an elastic articulation with the ball with a radial position of equilibrium, these grips are not suited to an air-filled ball. As the dog cannot easily access them, it  
5 seeks to grip the large ball directly via its outer cover, thus very soon puncturing it. In addition, the shape of these grips and their position impede the correct rolling and bouncing of an air-inflated large ball. Furthermore, an American patent numbered US 4,321,888 describes a smaller  
10 ball for a small dog, consisting of two hemispherical parts joined together by a fine cord with emerges via two diametrically opposed holes to be knotted together several times to form one of the grips. This cord, having no rigidity, bends as soon as it comes out of this small ball  
15 and lies against its surface. A similar cord fitted to an air-inflated large ball would not be able to be gripped readily by the mouth of a dog. As a result, the dog would try to grip the air-inflated large ball by its out cover and would thus very soon puncture it.

20 The reference to any prior art in this specification is not, and should not be taken as, an acknowledgment or any form of suggestion that that prior art forms part of the common general knowledge in Australia.

25 The present invention provides a solution to these problems or at least provides a useful alternative to the prior art.

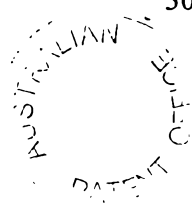
This device making it possible to play ball with a dog using a ball or the like, used in team sports, intended to be inflated with pressurized air, equipped with an automatic shut-off inflation valve or ball of the preinflated type, so that a dog can, among other things, bring the ball back in his mouth without puncturing the ball, of the type

30



consisting of at least one grip, of the dog, said grip being designed to be grasped in the mouth of the dog, said ball having at least a median circumference of a width of at least 90° of angular sector with respect to the center of the ball free of any grip protruding from this surface so as to allow the ball to roll in at least one direction, is characterized in that said grip has an oblong shape along a longitudinal axis, such as the shape of cylinder, a cone, a bar, a rod or such that it resembles an object such as, for example, a bone or a sausage, and in that the part of said grip closest to the center of the ball is rigid or semi-rigid so that it can keep itself erect and in that a base of said grip defines, with a zone of said ball adjacent to this said base, an articulation such that, under the effect of a force exerted laterally on said base of the grip, the latter returns in a position of equilibrium such that its longitudinal axis intersects substantially the center of said ball in order to allow a good rolling or bouncing of the said ball, so that the grip projects, erects, protruding to a marked extent beyond the zone of the ball at which it is located, therefore always being readily accessible to the mouth of the dog, this dissuading the dog from gripping the ball directly by its outer cover as this would soon cause the ball to be punctured.

One embodiment of this device is characterized in that the base of the grip is securely and firmly connected to a full or perforated wrapping or enveloping element made of a strong material such as plastic, synthetic cord, natural cord, lashing, Kevlar (trade name), synthetic strapping, natural strapping, intended to be run right around the ball, closely following its shape, at least temporarily while the



ball is being used with a dog, the elastic articulation with a position of equilibrium being between the wrapping element and the zone of the ball adjacent to the base of the grip by virtue of the elastic deformation of this zone of the ball.

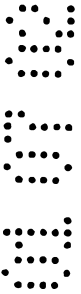
5 Another embodiment of the device is characterized in that the wrapping or enveloping element is cording or strapping wrapped around a ball in such a way as to describe at least three circumferences, such as circles, located in at least three mutually different planes, secured together  
10 so as to trap the ball in a strong net, from which the ball can be extracted and reintroduced by deflating.

Another embodiment of the device is characterized in that the base of the grip passes through the wrapping or enveloping element so that part of the base of the grip is  
15 inserted between the wrapping or enveloping element and the outer cover of the ball.

Another embodiment of the device is characterized in that the base of the grip is arranged around a part of the wrapping or enveloping element so that part of the base of  
20 the grip is inserted between the wrapping or enveloping element and the outer cover of the ball.

Another embodiment of the device is characterized in that the base of the grip is securely and firmly connected directly to a zone of the outer cover of a ball, for example  
25 by bonding, sewing, by making it as one and the same piece of molded plastic, the elastic articulation with a position of equilibrium then being between the base of the grip and the zone of the ball adjacent to the base of the grip by virtue of the elastic deformation of this zone of the ball.

30 Another embodiment of the device characterized in that the base of the grip is securely and firmly connected to an inserted internal element such as a block, a strip, the head



of a screw, between the internal bladder and the outer cover of a ball, the outer cover of which ball has at least one opening so as to allow the connection between the inserted internal element and the base of the grip, the elastic articulation with a position of equilibrium then being  
5 between the inserted internal element and the zone of the ball adjacent to the inserted internal element by virtue of the elastic deformation of this zone of the ball.

Another embodiment of the device is characterized in  
10 that the base of the grip is securely and firmly connected to a zone of the internal bladder of a ball, the outer cover of which has at least one opening so as to allow the connection between the internal bladder and the base of the grip, the elastic articulation with a position of  
15 equilibrium then being between the base of the grip and the zone of the ball adjacent to the base of the grip by virtue of the elastic deformation of this zone of the ball.

Another embodiment of the device is characterized in that the base of the grip is attached to the element to  
20 which it is connected.

Another embodiment of the device is characterized in that the base of the grip is an extension of the element to which it is connected.

Another embodiment of the device is characterized in  
25 that the grip is made of plastic, of rubber, of cord, of textile, to give it good strength without injuring the mouth of a dog.

Another embodiment of the device is characterized in that the grips, when there are at least two of these, are  
30 arranged with respect to the ball so that they are diametrically opposed so as not to unbalance the ball as it moves, so that it can travel in a straight line.



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Another embodiment of the device is characterized in that the entirety of the grip is rigid.

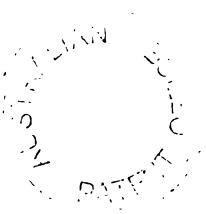
Another embodiment of the device is characterized in that the grip is a hard plastic sausage connected to the wrapping element by at least one metal fastener.

Another embodiment of the device is characterized in that the ball is of spherical shape.

Figure 1 depicts a large ball trapped in a strong net (2) to which are attached two opposed grips (1), one of which is being gripped in the mouth of a dog.

Figure 2 depicts the central cross section through a large ball, the two elongate grips (1) of which are an extension of the outer cover (3) of the ball with which they have been molded. This figure also schematically depicts the elastic articulation between the base of the grip (1b) and the adjacent zone of the ball, which always repositions the grip (1) in a radial position of equilibrium.

Figure 3 depicts the central cross section through the outer cover (3) of a large ball in which cover a strap (4) is fully wrapped around the internal bladder (5) of this ball. This strap (4) allows two sausage-shaped grips to be fixed to it, through two opposed openings made in the outer cover (3) of the ball.



The device making it possible to play ball with a dog using a large ball consists of at least one grip (1), of at least one connecting element (2)(4), of the outer cover (3) and, for certain embodiments, of the inner bladder (5) of a ball.

Playing ball with a dog using a large ball is interesting only if you can shoot the ball and if the ball rolls and bounces adequately. This is why a large ball of a spherical type used in team sports, such as a football, a basketball, a volleyball or a handball is highly appropriate to this practice. The ball is of a spherical type as opposed to the oval balls used in particular in rugby and in American football. A spacehopper, on which a child sits to bounce along, is entirely unsuited to this practice because it is too bulky to be thrown and brought back by a dog, even a large dog. A large ball, the diameter of which is between 15 cm and 40 cm is entirely satisfactory. The outer cover (3) of the large ball, which cover is used to play with a dog, has to be inextensible, so as to rigidify the ball when the latter is inflated with air, thus discouraging the dog from gripping it in its mouth. In order to allow the ball to bounce, which is one of the attractions of this practice, the ball has to be inflated with pressurized air so as to allow this ball to bounce and roll correctly. As the internal air pressure has to be very high in order to rigidify the ball, this result is obtained using an automatic shut-off inflation valve or using a ball of the preinflated type. Beach balls, on the other hand, which are fitted with a valve for inflation by mouth, fitted with a cap, lack rigidity because the internal air pressure is insufficient. As a result, a dog may grasp such a ball in its mouth and very soon puncture it.

To discourage the dog from gripping the large ball via its outer cover (3), which would have the immediate



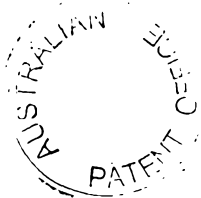
consequence of puncturing it, the grip (1) has always to be readily accessible to the mouth of the dog. To do this, it is essential for the grip (1) to project erect, protruding to a marked extent beyond the zone of the ball at which it is located. To do this, the grip (1) has to be, at least as far as its base (1b) is concerned, that is to say at least as far as the part of the grip (1) closest to the outer cover (3) of the ball is concerned, always arranged along a radial axis with respect to the center of the ball. For this, at least the base of the grip (1b) has to be rigid to prevent it from curving, folding, or lying flat against the outer surface of the outer cover (3) of the ball. For this, the base of the grip (1b) has to be held securely, firmly and stably with respect to the ball to encourage it to remain in a radial position with respect to the center of the ball, resisting the external stresses exerted on it. However, the base of the grip (1b) which is rigid, arranged firmly and radially with respect to the center of the ball, slows the movement of this ball (negotiation of obstacles, forces of friction in the air, etc.). This is why the base of the grip (1b) needs to be articulated with respect to the ball so as to be able to bend, for example, when it strikes an obstacle, in the air to limit the friction forces, etc. However, the longitudinal axis of the base of the grip (1b) has systematically to reposition itself along a radial axis with respect to the center of the large ball as soon as the external stresses exerted on it cease so that the grip (1) is always readily accessible to the mouth of the dog. For this, the large ball, which is inflated with pressurized air, and more particularly the zone of this ball that is located near the grip (1), has properties of elastic deformation. By way of indication, this grip may be made of a length of rubber pipe, the base of which is made more rigid by introducing a screw into it. The entirety of the grip (1) may also be rigid. By way of indication, a rigid



grip (1) may consist of the braiding of four strands of lashing braided together. Likewise, the grip (1) may be a hard plastic sausage. Conversely, a grip (1) consisting of fine cord, emerging through the outer cover (3) of a large ball through an orifice would deform under the action of gravity without standing up prominently and permanently above the outer surface of the outer cover (3) of the ball. Likewise, a grip (1) made of a chain would suffer the same result, as the links of this chain can move relative to one another.

In order for the ball to be able to roll in at least one direction, which is one of the benefits of this practice, no grip (1) must project beyond the outer surface of the outer cover (3) of the ball in a central circular zone 360° long by 90° wide.

The shape of the grip (1) must be elongate, for example representing a cylinder, a bone, a sausage or a cone. This grip of elongate shape is the best suited to being grasped in the mouth of a dog. What happens is that the grip (1) becomes wedged in the dog's mouth, sideways, behind its canines, between its premolars. The ball hangs down the side of the mouth of the dog (which gives the dog a clear view and keeps its muzzle unencumbered). This grip needs to measure approximately the width of the mouth of the dog, so that it can be wedged simultaneously by both the left-hand half and the right-hand half of the jaw. Under pulling forces, the grip (1) can merely slide sideways between the dog's teeth without damaging them. Conversely, a ring-shaped grip is dangerous to the dog's teeth. This is because since the ring passes behind the dog's incisors, pulling forces exerted on this grip tend to dislocate its teeth and its lower jaw. In addition, an elongate grip only very slightly impedes the rolling and bouncing of a ball. Indeed, the optimum embodiment of this device consists in placing two elongate grips at the periphery of a large ball, the grips being



arranged so that they are diametrically opposed and in a radial axis with respect to the center of the ball, so that they can be likened to an axis of rotation. As a result, the ball is balanced as it moves, thus  
5 traveling in straight lines. Conversely, if the two grips were located one beside the other, as in the case of the spacehopper, or if there were just one grip, the large ball would be unbalanced and would travel in a curved path. As a result of this, the large ball does  
10 not travel very far, the person throwing the ball cannot reach a precise objective, the dog has difficulties in grasping the grip, as the latter contacts the ground. Further, an excessively long (longer than 10 cm) grip (1) would compromise the  
15 rolling and bouncing of the ball, without improving the ability of the dog to grip it in its mouth. For these same reasons, the base of the grip (1b) has to have a reduced and unique cross section. A handle-shaped grip, which therefore has a double cross section at its base,  
20 impedes the movement of the ball. The ideal grip (1) is a segment of a cylinder 8 to 10 cm long and 2 cm in diameter. On the other hand, a grip in the shape of a pyramid 3 cm tall and with a square base (the part of the grip closest to the outer surface of the outer  
25 cover of the ball) with sides measuring 5 cm has nothing to recommend it. Likewise, as the ball is as likely to be thrown by hand and kicked away by the foot, a grip in the form of a handle in which a foot could catch is not to be adopted. The grip (1) has to  
30 be big enough to allow it to be grasped firmly in the mouth of a dog, but not too big in order for it not to impede the movements of the ball, made of a material which does not have an adverse influence on the dog's teeth and which can withstand the fangs of the dog. By  
35 way of indication, two pieces of large-diameter (8 mm) lashing about 40 cm long can be braided together to form a roughly cylindrical grip (1), the end of which is melted by heating to prevent any unraveling. Just two grips (1), located in opposition at the periphery

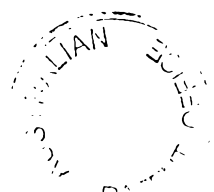


of a large ball, are sufficient for being swiftly grasped by a dog, only very slightly impeding the mobility of the ball.

5 The base of the grip (1b) may be connected, either to a full or perforated wrapping or enveloping element (2) placed around the large ball or to an internal element (4) inserted between the outer cover (3) and the inner bladder (5) of the ball, or to the outer cover (3) and/or the inner bladder (5) of a ball. The wrapping or enveloping element (2), which experiences significant tensile forces and attempts at tearing it from the fangs of the dog, needs to be strong. This is why current nets used to hang balls up in shops cannot be used, because they would very quickly become torn. In addition, these nets do not fully follow the spherical shape of the ball, and the latter rolls and bounces with difficulty. As the wrapping or enveloping element (2) fully or partially envelopes the ball, the latter therefore finds itself trapped in this envelope from which the ball can be extracted either by deflating or through an opening mechanism provided in this envelope. It may, for example, be a bag in the shape of the ball and equipped with a zip-fastening opening mechanism, a laced opening, an opening with a buckle, buttons, etc., and to the surface of which at least one sausage-shaped grip (1) is attached. It is preferable for the wrapping or enveloping element (2) to be very reduced in nature so that it does not make the ball much heavier if wet.

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20  
25  
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The wrapping element (2) may be a tie. This tie, the shape (rounded, flattened, etc.), natural material (cotton, leather, etc.) or synthetic material (Nylon (trade name), Kevlar (trade name), etc), the construction (braided or otherwise), the dimensions (cross section preferably in excess of 0.5 mm<sup>2</sup>) and color of which may vary, may, in particular, be a lashing, some Nylon (trade name) fishing line or a Kevlar (trade name) filament. By way of indication, a lashing 3 mm in diameter can be wound around a large



ball in three circles located in three mutually perpendicular planes, joined together by knots, to certain intersections of which a grip (1) is attached.

5 The internal element (4) inserted between the outer cover (3) and the inner bladder (5) of the ball may be a strap. By way of indication, a very thin and narrow (20 mm wide) strap is introduced into a large ball and wrapped around its internal bladder (5) so that its two  
10 ends re-emerge together through one and the same opening in the outer cover (3) of the ball, while a double thickness of this strap emerges through another opening opposite the first.

15 The base of the grip (1) may be connected directly to the outer cover (3) of a ball. The material (leather, plastic, etc.), the dimensions (thickness and diameter) and the color of this cover may vary. By way of indication, two grips (1) may be stitched to the  
20 leather outer cover (3) of a ball.

The grip (1) is either an extension of the connecting means or attached to the latter. In the former instance, the grip (1) may be molded with the outer  
25 cover (3) of the ball. It may also be a continuation of the ties surrounding the ball, of the internal element (4) inserted between the outer cover (3) and the inner bladder (5) of the ball. By way of indication, two long lashings are braided together to form a first grip (1).  
30 They then pass around a ball to form a strong net (2). Finally, they are braided together again to form a second grip (1). In the latter instance, the base of the grip (1b) may be connected to the wrapping or enveloping element (2) or to the internal element (4)  
35 inserted between the outer cover (3) and the inner bladder (5) of a ball by a strong knot, by stitching, by bonding, etc. The base of the grip (1b) may be fixed to the outer cover (3) of the ball by screwing, inseting, etc. By way of indication, the grip (1) may



be screwed onto a wide-head plastic screw emerging through the outer cover (3) of a ball. By way of indication, a screw, the flat head of which is inserted between the outer cover (3) and a wrapping element (2),  
5 passes through the wrapping element (2) to fasten into the base of a grip (1b). By way of indication, two metal wires may cross under the intersection of two meshes of a net arranged around a ball, to reappear over this intersection before being fixed into a  
10 plastic sausage. In this example, the base of the grip (1b) is arranged around part of the wrapping element (2) unlike the previous example in which the base of the grip (1b) passed through the wrapping element (2). When the base of the grip (1b) is connected to a zone  
15 of the outer cover (3) of the ball, when it is displaced off-line by an external stress, the base of the grip (1b) exerts added pressure on the side toward which it leans, and reduced pressure on the opposite side. The internal air pressure of the ball resists  
20 this deformation and as soon as the external stress ceases, repositions the axis of the base of the grip (1b) along an axis which is radial with respect to the center of the ball.

25 This device allows a dog to fetch a ball without puncturing it, and also allows several dogs to play together pulling the ball along by each of its grips.

30 This invention is likely to be of interest to the manufacturers of items for dogs.

Throughout this specification and the claims which follow, unless the context requires otherwise, the word "comprise", and variations such as "comprises" and "comprising", will be understood to imply the inclusion of a stated integer or step or group of integers or steps but not the exclusion of any other integer or step or group of integers or steps.



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. Device making it possible to play ball with a dog using  
a ball or the like, used in team sports, intended to be  
5 inflated with pressurized air, equipped with an automatic  
shut-off inflation valve or ball of the preinflated type, so  
that a dog can, among other things, bring said ball back in  
his mouth without puncturing said ball, of the type  
consisting of at least one grip, said grip being designed to  
10 be grasped in the mouth of the dog, said ball having at  
least a median circumference of a width of at least 90° of  
angular sector with respect to the center of the ball free  
of any grip protruding from this surface so as to allow the  
ball to roll in at least one direction, characterized in  
15 that said grip has an oblong shape along a longitudinal  
axis, such as the shape of a cylinder, a cone, a bar, a rod  
or such that it resembles an object such as, for example, a  
bone or a sausage, and in that the part of said grip closest  
to the center of the ball is rigid or semi-rigid so that it  
20 can keep itself erect and in that a base of said grip  
defines, with a zone of said ball adjacent to this said  
base, an articulation such that, under the effect of a force  
exerted laterally on said base of the grip, the latter  
returns in a position of equilibrium such that its  
25 longitudinal axis intersects substantially the center of  
said ball in order to allow a good rolling or bouncing of  
the said ball, so that the grip projects, erects, protruding  
to a marked extent beyond the zone of the ball at which it  
is located, therefore always being readily accessible to the  
30 mouth of the dog, thus dissuading the dog from gripping the  
ball directly by its outer cover as this would soon cause  
the ball to be punctured.



2. Device according to claim 1, characterized in that the base of the grip is securely and firmly connected to a full or perforated wrapping or enveloping element made of a strong material such as plastic, synthetic cord, natural cord, lashing, Kevlar (trade name), synthetic strapping, natural strapping, intended to be run right around a ball, closely following its shape, at least temporarily while the ball is being used with a dog, the elastic articulation with a position of equilibrium being between the wrapping element and the zone of the ball adjacent to the base of the grip by virtue of the elastic deformation of this zone of the ball.

3. Device according to claim 2, characterized in that the wrapping or enveloping element is cording or strapping wrapped around a ball in such a way as to describe at least three circumferences, such as circles, located in at least three mutually different planes, secured together so as to trap the ball in a strong net, from which the ball can be extracted and reintroduced by deflating.

4. Device according to claim 2, characterized in that the base of the grip passes through the wrapping or enveloping element so that part of the base of the grip is inserted between the wrapping or enveloping element and the outer cover of the ball.

5. Device according to claim 2, characterized in that the base of the grip is arranged around a part of the wrapping or enveloping element so that part of the base of the grip is inserted between the wrapping or enveloping element and the outer cover of the ball.

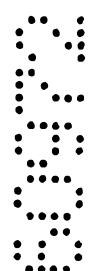


6. Device according to claim 1, characterized in that the base of the grip is securely and firmly connected directly to a zone of the outer cover of a ball, for example by bonding, sewing, by making it as one and the same piece of  
5 molded plastic, the elastic articulation with a position of equilibrium then being between the base of the grip and the zone of the ball adjacent to the base of the grip by virtue of the elastic deformation of this zone of the ball.

10 7. Device according to claim 1, characterized in that the base of the grip is securely and firmly connected to an inserted internal element such as a block, a strip, the head of a screw, between the internal bladder and the outer cover of a ball, the outer cover of which ball has at least one  
15 opening so as to allow the connection between the inserted internal element and the base of the grip, the elastic articulation with a position of equilibrium then being between the inserted internal element and the zone of the ball adjacent to the inserted internal element by virtue of  
20 the elastic deformation of this zone of the ball.

8. Device according to claim 1, characterized in that the base of the grip is securely and firmly connected to a zone of the internal bladder of a ball, the outer cover of which  
25 has at least one opening so as to allow the connection between the internal bladder and the base of the grip, the elastic articulation with a position of equilibrium then being between the base of the grip and the zone of the ball adjacent to the base of the grip by virtue of the elastic  
30 deformation of this zone of the ball.

9. Device according to any one of the preceding claims,



characterized in that the base of the grip is attached to the element to which it is connected.

10. Device according to any one of claims 1 to 8,  
5 characterized in that the base of the grip is an extension of the element to which it is connected.

11. Device according to any one of the preceding claims,  
characterized in that the grip is made of plastic, of  
10 rubber, of cord, of textile, to give it good strength without injuring the mouth of a dog.

12. Device according to any one of the preceding claims,  
characterized in that the grips, when there are at least two  
15 of these, are arranged with respect to the ball so that they are diametrically opposed so as not to unbalance the ball as it moves, so that it can travel in a straight line.

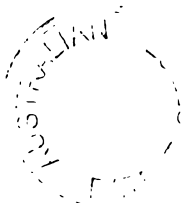
13. Device according to any one of the preceding claims,  
20 characterized in that the entirety of the grip is rigid.

14. Device according to claim 3, characterized in that the grip is a hard plastic sausage connected to the wrapping element by at least one metal fastener.

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15. Device according to any one of the preceding claims, characterized in that the ball is of a spherical shape.

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16. A device substantially as hereinbefore described with reference to the accompanying drawings.

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