CLAIMS

1. A drum suitable for anchoring a cable to a frame, said drum being suitable for being mounted rotatably about an axis of rotation on said frame, the drum having a lateral surface around an axis parallel to the axis of rotation, the drum being characterized in that the lateral surface comprises a first portion having at least a first bend radius measured in a plane perpendicular to the axis of rotation strictly greater than at least a second bend radius of a second portion of the lateral surface measured in said plane, the drum being suitable for allowing a travel of the cable by the winding and/or unwinding of said cable around the lateral surface along the first portion, by the rotation of said drum about the axis of rotation between a first and a second stop position.

2. The drum as claimed in the preceding claim, wherein the axis of rotation intersects with the plane at an intersection point located at a distance from the center of a circle tangent to said first portion of between 0% and 10% of the value of a radius of the circle, the radius of the circle being equal to the first bend radius of the first portion, the first portion being centered around the intersection point.

3. The drum as claimed in one of the preceding claims, wherein the first portion comprises the point of maximum bend radius of the lateral surface measured in the plane.

4. The drum as claimed in one of the preceding claims, wherein the lateral surface has, in the plane, an ovoid shape and wherein the first portion of the lateral surface is contained in the part of the ovoid opposite the portion of said ovoid with the smallest bend radius.

5. The drum as claimed in one of claims 1 to 3, wherein the lateral surface has, in the plane, an ellipse shape, and wherein the first portion of the lateral surface is contained in one of the two arcs of the ellipse delimited by the major axis of said ellipse.

6. The drum as claimed in claim 5 in combination with claim 2 wherein the intersection point between the plane and the axis of rotation is located on the semi-minor axis of the ellipse opposite the first portion of the lateral surface with respect to the center of the ellipse.

7. The drum as claimed in one of the preceding claims, wherein the length of the first portion of the lateral surface measured in the plane is greater than 300 mm, preferably greater than 600 mm.

8. A cable anchoring system, comprising a frame, a drum as claimed in one of the preceding claims mounted rotatably on the frame about the axis of rotation, and at least one

spring for absorbing the forces generated by the travel of the cable between the first and the second stop position arranged between the drum and the frame.

9. The cable anchoring system as claimed in the preceding claim, wherein the at least one force absorbing spring is a torsion spring or a set of two torsion springs assembled in series.

10. The cable anchoring system as claimed in the preceding claim, wherein each torsion spring comprises a first metallic and hollow square-based prism, a second metallic and hollow square-based prism housed inside the first prism with an angular offset with respect to the first prism, and four elastomer cylinders arranged between the first prism and the second prism, in the corners of the first prism.

11. The cable anchoring system as claimed in the preceding claim, comprising two torsion springs in series, the second square-based prism of the first torsion spring being connected to the second square-based prism of the second torsion spring.

12. The cable anchoring system as claimed in one of claims 8 to 11, wherein the force absorption spring is arranged along the axis of rotation so as to permit the rotation of the drum about the axis of rotation with respect to the frame between the first and the second stop position without any roller bearing or pad.

13. The cable anchoring system as claimed in one of claims 8 to 12, of which the first and the second stop position are angularly offset with respect to the axis of rotation by an angle between 0° and 60°, preferably between 0° and 90°.

14. A lifting device comprising:
- a spreader comprising at least one fastening member for fastening a load to be lifted,
- an anchoring system as claimed in one of claims 8 to 13 comprising a frame and a drum as claimed in one of claims 1 to 7, the frame being attached to the spreader and the drum being attached to the frame,
- a winder suitable for being attached to a lift machine,
- a cable, a first end of the cable being anchored to the drum of the anchoring system by a fixed winding of at least two turns around the lateral surface of the drum and a second end of the cable being wound around the winder.

15. The lifting device as claimed in the preceding claim, wherein the lateral surface has a minimum bend radius in the plane strictly greater than the static bend radius of the cable.

16. The lifting device as claimed in the preceding claim, wherein the winder is an electronically-controlled winder and wherein the length of the first portion of the drum measured in the plane is equal to the double of the product of the maximum speed of the spreader by the reaction time of a control loop of said winder.

17. A lift machine, such as a crane, a gantry or a forklift truck, comprising a lifting device as claimed in one of claims 14 to 16.