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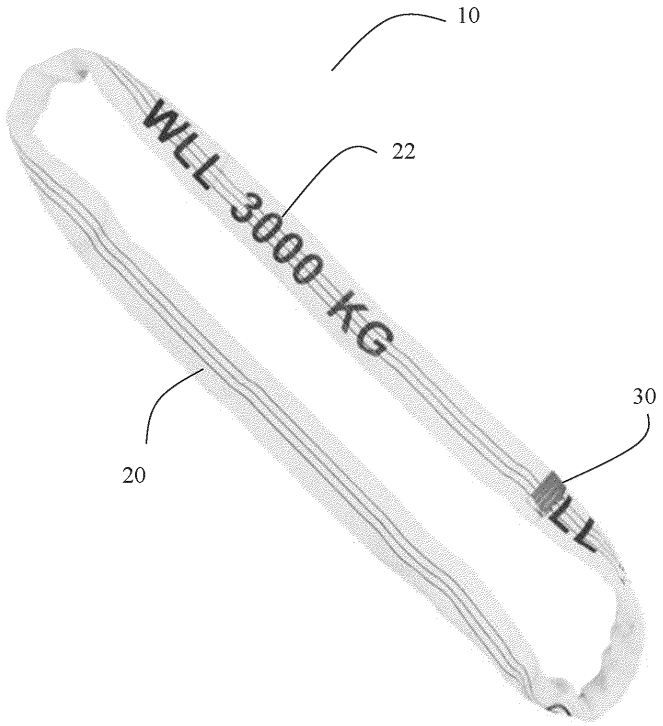
(54) **A LIFTING SLING**

(57) A lifting sling is described including: an endless loop formed from a number of strands of yarn; a cover surrounds the strands of yarn; an identifying tag is attached to the cover by way of a region of elastic material and is moveable by stretching the elastic region between a retracted position and an extended position; in the retracted position the tag is protected from damage; and in the extended position the tag extends out of the cover to enable information identifying the sling to be read from the tag.



PRIOR ART

Fig 1

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Description

Technical Field

[0001] The present invention relates to a lifting sling and particularly to a round lifting sling.

Background to the Invention

[0002] When lifting a load or item, such as when loading or unloading a truck, or delivering building materials or other heavy items, it is common to use a lifting sling such as a round lifting sling to attach the item to a crane or other lifting device. These slings are lightweight, making them easy to use and store, and they are of superior strength and easier to work with than working with wire rope or chain.

[0003] A round lifting sling is typically formed from an endless loop of turns of a yarn formed from polyester or nylon. The number of turns of yarn in the sling will dictate the lifting capacity of the sling. The turns of yarn are encased in cover formed from a durable polyester fabric that is color-coded to indicate at a glance the weight-lifting capacity of the slings.

[0004] For safety and regulatory reasons, each lifting sling must have a permanently attached identification tag to indicate size, type, and capacity as well as identifying the supplier of the sling. It is not lawful in many jurisdictions to use a sling which does not include this identifying information. The identification tag is typically sewn onto the cover of the sling.

[0005] One major advantage of round lifting slings is that the wear points can be adjusted with each use by rotating the sling, to extend the working life of the sling. However, this inevitably means that during some lifts the identification tag is located at a lift point, or other region of localised strain in the sling. This can cause damage to the tag, or to the stitches holding the tag in place. If the tag becomes damaged to the extent that it is unreadable or becomes separated from the sling, then the sling no longer complies with local regulations and must be disposed of, despite the fact that the sling is otherwise still in good working order.

[0006] There remains a need to provide for improved lifting slings.

Summary of the Invention

[0007] In a first aspect the present invention provides a lifting sling including: an endless loop formed from a number of strands of yarn; a cover surrounds the strands of yarn; an identifying tag is attached to the cover by way of a region of elastic material and is moveable by stretching the elastic region between a retracted position and an extended position; in the retracted position the tag is protected from damage; and in the extended position the tag extends out of the cover to enable information identifying the sling to be read from the tag.

[0008] When in the retracted position, the tag may be accessible by user to grasp the tag to pull the tag to its extended position.

[0009] When in the retracted position, the tag may be protected inside a pocket region of the cover of the sling.

Brief Description of the Drawings

[0010] An embodiment of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 shows a prior art round lifting sling;
Figure 2 shows an embodiment of a lifting sling; and
Figure 3 shows the lifting sling of figure 1.

Detailed Description of the Preferred Embodiment

[0011] Referring to figure 1, a prior art lifting sling 10 is shown. The sling is formed from a number of turns of polyester yarn (not visible) which are encased in a cover 20. This sling is formed with a number of turns of yarn sufficient for the sling to be rated with a working load limit (WLL) of 3000KG. This information is embossed in large letters 22 on the cover 20. The cover is also yellow in colour which is a conventional designation for a sling with a WLL of 3000kg.

[0012] An identification tag 30 is sewn onto the cover 20 and shows information to satisfy regulatory requirements including information identifying the supplier of the sling and other information such as batch codes, load rating and date of manufacture.

[0013] During use, the tag 30 may be subject to wear and tear which can render the tag unreadable and/or cause the tag to become separated from the cover 20. After this occurs, the sling 10 is no longer useable.

[0014] Referring to figures 2 and 3, a sling 100 is shown and like reference numerals will be used to indicate like components to sling 10.

[0015] Sling 100 is also formed from a number of turns of polyester yarn which are encased by a cover 120. A tag 30 which bears identifying and regulatory information is attached to cover 120 by way of a region of elastic fabric 40. The tag 30 normally adopts a retracted position as shown in figure 2. In this position, the tag 30 is protected inside a pocket region 122 of the cover 120. (It is to be noted that when in the position shown in figure 2 both of the elastic fabric 40 and the tag 30 are hidden from view inside the pocket region 122. However, they are shown in the figure as hidden detail for illustration purposes.)

[0016] Referring now to figure 3, a user A can grasp the end of the tag 30 inside the pocket and pull the tag out by stretching the region of elastic fabric 40. This causes the tag 30 to move to an extended position in which the tag 30 extends out of the pocket region 122 to enable the information displayed on the tag to be read by the user. (It is to be noted that when in the position shown in figure 3, the elastic fabric 40 is hidden from view inside the

pocket region 122. However, it is shown in the figure as hidden detail for illustration purposes).

[0017] When the user A lets go of the tag the elastic fabric 40 relaxes and draws the tag 30 back to its retracted position as shown in figure 2.

[0018] During use, the tag is protected from damage inside the pocket region 122. This prevents the tag from becoming detached from the sling and also prevents damage to the tag itself. Therefore, the regulatory information remains readable and associated with the sling to prolong the legal lifetime of the use of the sling.

[0019] Any reference to prior art contained herein is not to be taken as an admission that the information is common general knowledge, unless otherwise indicated.

[0020] Finally, it is to be appreciated that various alterations or additions may be made to the parts previously described without departing from the spirit or ambit of the present invention.

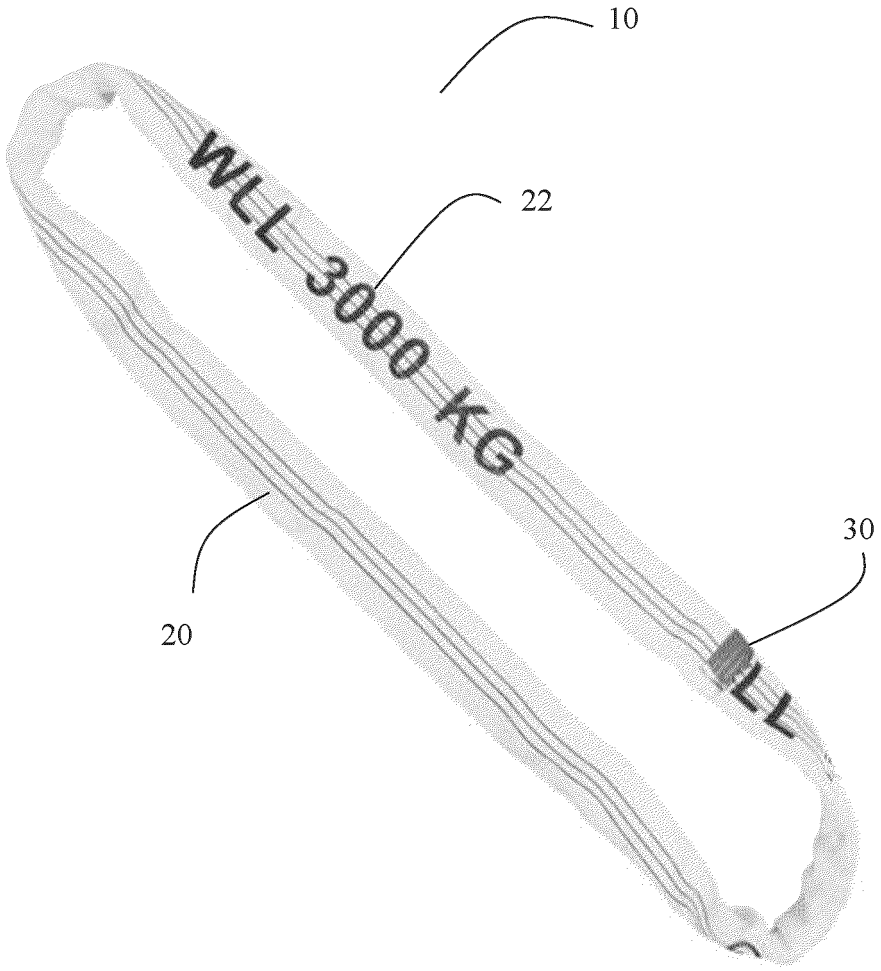
Claims

1. A lifting sling including:

an endless loop formed from a number of strands of yarn;
a cover surrounds the strands of yarn;
an identifying tag is attached to the cover by way of a region of elastic material and is moveable by stretching the elastic region between a retracted position and an extended position;
in the retracted position the tag is protected from damage; and
in the extended position the tag extends out of the cover to enable information identifying the sling to be read from the tag.

2. A lifting sling according to claim 1 wherein, when in the retracted position the tag is accessible by user to grasp the tag to pull the tag to its extended position.

3. A lifting sling according to any preceding claim wherein, when in the retracted position, the tag is protected inside a pocket region of the cover of the sling.



PRIOR ART

Fig 1

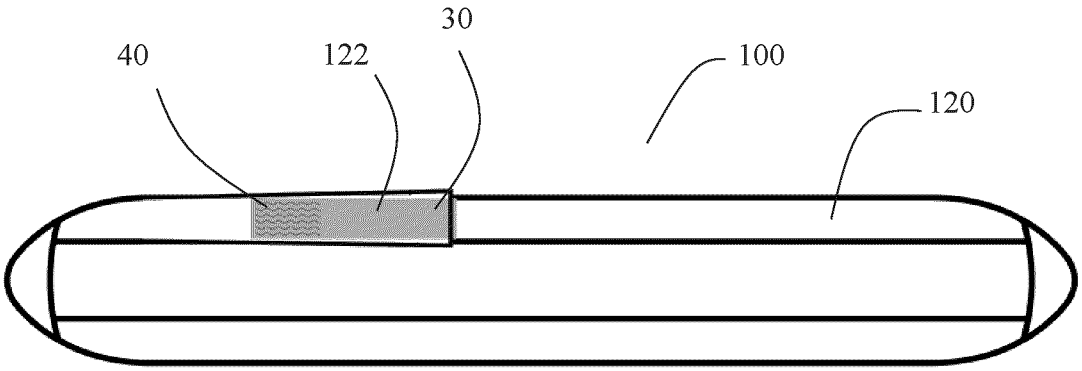


Fig 2

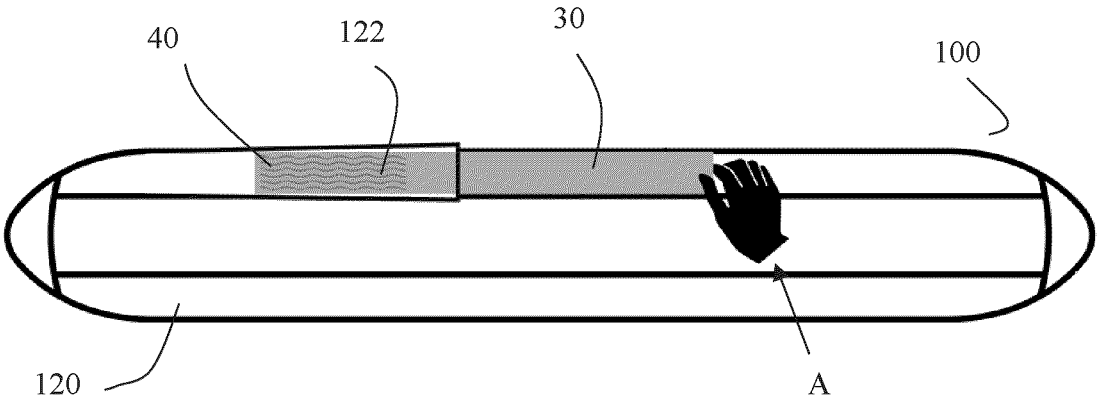


Fig 3

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EUROPEAN SEARCH REPORT

Application Number
EP 24 20 7650

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	EP 2 678 188 B1 (CARL STAHL HEBETECHNIK GMBH [DE]) 26 October 2016 (2016-10-26) * paragraph [0015] - paragraph [0021]; figure ' *	1-3	
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			TECHNICAL FIELDS SEARCHED (IPC)
			B66C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	14 March 2025	Popescu, Alexandru

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
O : non-written disclosure
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T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 24 20 7650

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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