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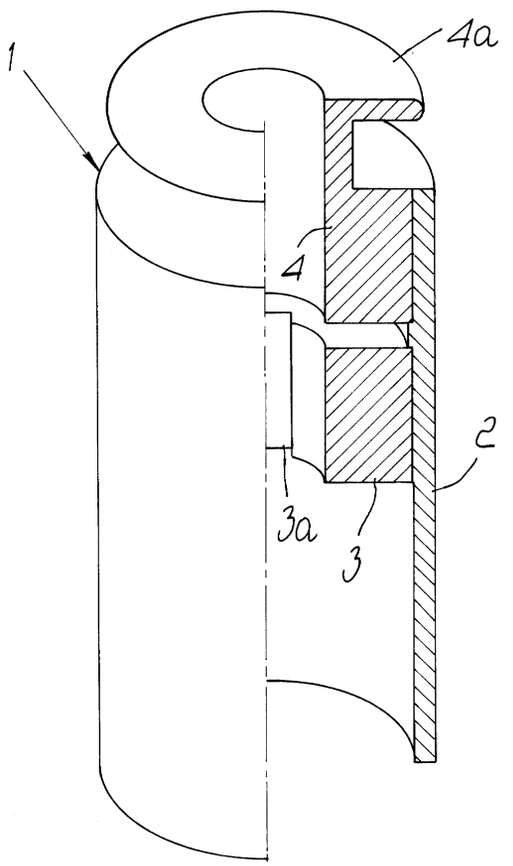
(54) Adhesive spreading roller in labeling machine

(57) An adhesive spreading roller in a labeling machine, comprising a cylindrical outer skirt (2) made of steel and at least one insert (3,4) which is stably associated with the internal surface of the skirt (2), characterized in that the at least one insert is made of plastics which is resistant to abrasion and to attack by external agents.



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Description

[0001] The present invention relates to an adhesive spreading roller in a labeling machine.

[0002] It is known that labeling machines comprise a roller designed to spread adhesive onto the labels before they are applied to the containers for which they are intended; said roller is associated with a driving shaft so as to rotate.

[0003] An operation that has to be performed very frequently at the label pasting unit is the cleaning of the residues of adhesive, which tend to accumulate; this operation entails removing the roller from the driving shaft.

[0004] This leads to the need to provide a roller which, besides being provided with a slot for accommodating a key for actuation by the driving shaft, comprises a grip handle at the upper end in order to facilitate the action of the operator.

[0005] Spreading rollers of the prior art thus comprise an outer cylindrical skirt or sleeve made of steel and two inserts which are associated with the internal surface of the skirt; a first insert is located proximate to the end of the skirt, protrudes therefrom and is shaped like a grip handle, and a second insert is provided with a slot for accommodating the actuation key.

[0006] Said inserts comprised within the rollers of the prior art are made of brass in order to prevent any possibility of seizure with respect to the driving shaft, which would be fatal for correct operation due to the high frequency of the removals required, as mentioned, in order to clean said rollers; however, in this way the rollers are very heavy and therefore difficult to handle by the operators.

[0007] The attempt to provide the inserts by using aluminum, which is well-known as a lightweight material, has failed because said material has proved to be unsuitable to withstand the action of the substances with which the roller makes contact during operation, with such alterations as to even deform the roller and render it unusable.

[0008] The aim of the present invention is to provide a roller which simultaneously comprises good performance in terms of easy sliding on the driving shaft and in terms of adequate light weight, so that it can be handled very easily during extraction and insertion with respect to the driving shaft, and is also durable.

[0009] This aim is achieved by an adhesive spreading roller in a labeling machine, according to the invention, which comprises a cylindrical outer skirt made of steel and at least one insert which is stably associated with the internal surface of the skirt so as to protrude therefrom in order to constitute a grip handle and is provided with a slot for accommodating a driving key of a driving shaft, characterized in that said at least one insert is made of plastics which is resistant to abrasion and to attack by external agents.

[0010] Further characteristics and advantages of the present invention will become better apparent from the description of a spreading roller, illustrated only by way of non-limitative example in the accompanying drawing, wherein the sole figure is a partially sectional view of a roller.

[0011] With reference to the figure, the reference numeral 1 generally designates the adhesive spreading roller, which comprises the outer cylindrical skirt or sleeve 2, made of steel.

[0012] The two inserts 3 and 4 are associated with the internal surface of the skirt by forced keying: the insert 3 is provided with a slot 3a for accommodating a driving key of a driving shaft, and the insert 4 protrudes from the skirt 2 with a portion 4a which is shaped like a handle for grip by an operator.

[0013] An important feature of the invention consists in that the inserts 3 and 4 are made of plastics which is resistant to abrasion and to attack by external agents.

[0014] The plastic material is selected such as not to absorb liquids and not be deteriorated in any way by the substances in general that can make contact with the spreading roller during its operation.

[0015] The necessary characteristics of easy handling of the roller during the frequent cleaning operations and an adequate durability thereof are thus ensured.

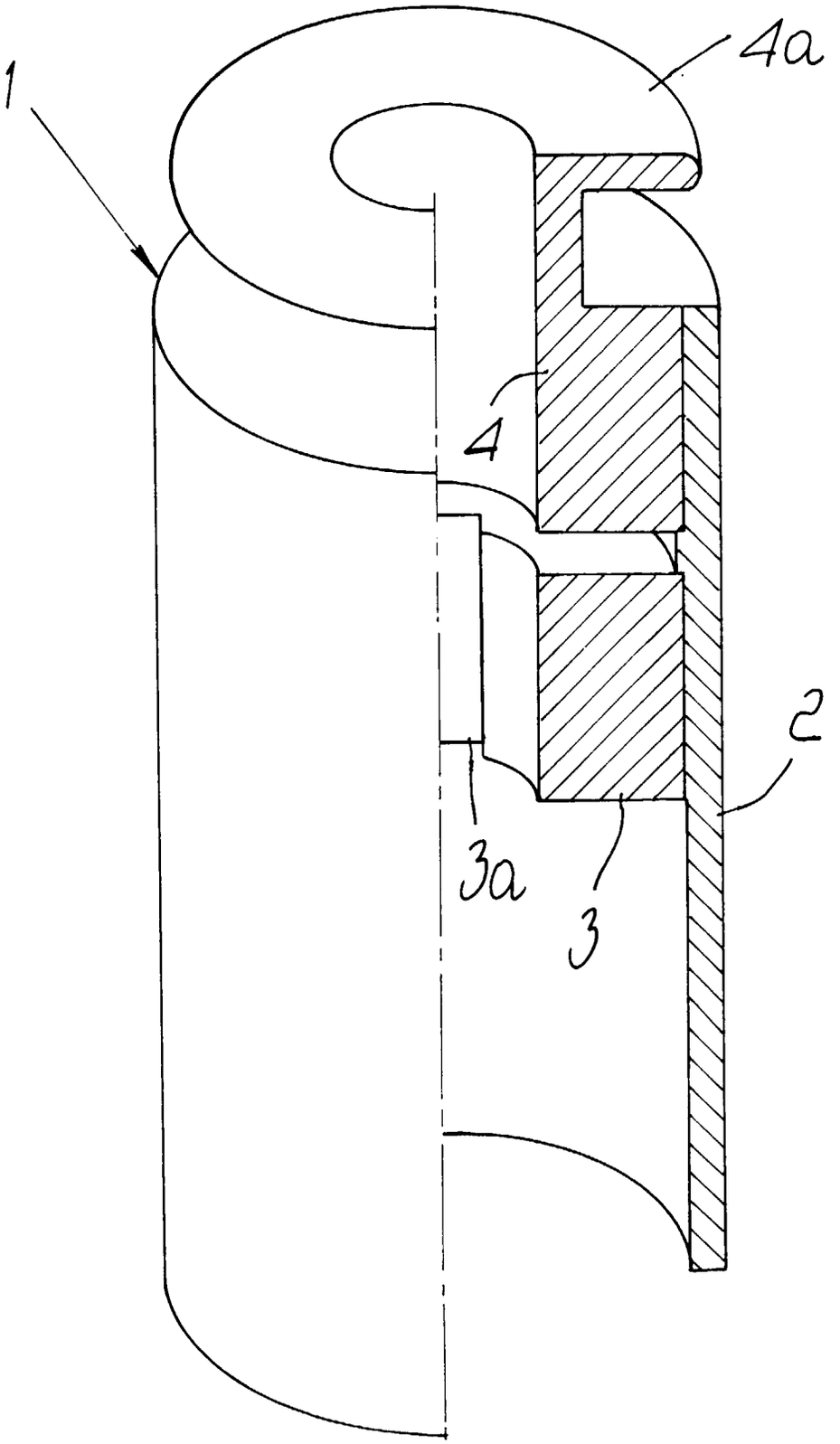
[0016] The disclosures in Italian Utility Model Application No. MN99U000022 from which this application claims priority are incorporated herein by reference.

[0017] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. An adhesive spreading roller in a labeling machine, comprising a cylindrical outer skirt (2) made of steel and at least one insert (3,4) which is stably associated with the internal surface of the skirt (2) so as to protrude therefrom in order to constitute a grip handle (4a) and is provided with a slot (3a) for accommodating a driving key of a driving shaft, characterized in that said at least one insert (3,4) is made of plastics, which is resistant to abrasion and to attack by external agents.

2. The spreading roller according to claim 1, characterized in that it comprises two inserts (3,4) made of a plastic material which is resistant to abrasion and to attack by external agents, with one (4) of said inserts (3,4) being arranged at the end of the skirt (2), protruding therefrom and being shaped as a grip handle (4a), the other insert (3) being provided with a slot (3a) for accommodating a driving key of a driving shaft.


1
4a
4
2
3a
3

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EUROPEAN SEARCH REPORT

Application Number
EP 00 12 7932

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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TECHNICAL FIELDS SEARCHED (Int.Cl.7)

B65C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	12 June 2001	Müller, C

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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T : theory or principle underlying the invention
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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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12-06-2001

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82