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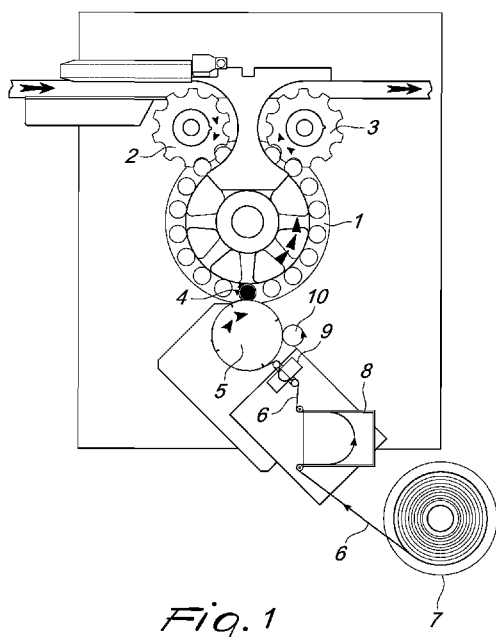
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(54) Title: MACHINE FOR LABELING BY MEANS OF PRE-PASTED LABELS PRINTED ON A RIBBON



(57) Abstract: A machine for labeling by means of pre-pasted labels printed on a ribbon (6), comprising a rotating carousel (1) provided with pans (4) for supporting containers to be labeled, and a drum (5) for cutting and transferring each individual label onto the containers which, in the motion of the carousel (1), progressively face said drum, the machine further comprising a rotating roller (10; 11), which is adapted to receive from the drum (5) each label designed to be applied to a container that is not present on the corresponding pan (4) of the carousel (1).

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MACHINE FOR LABELING BY MEANS OF PRE-PASTED LABELS PRINTED ON A RIBBON

Technical Field

The present invention relates to a machine for labeling by means of
5 pre-pasted labels printed on a ribbon.

Background Art

It is known that the practice of printing on a ribbon labels designed to
be applied to successive containers, the ribbon being wound in the form of
a roll and being provided with a film of glue at the face designed to adhere
10 to the containers to be labeled, is currently widespread: one thus speaks of
pre-pasted labels.

Labeling machines that work on pre-pasted labels provide, according
to a usual embodiment, for the presence of a rotating carousel provided with
pans for supporting the individual containers to be labeled and with a drum
15 which cuts the ribbon in order to separate each individual label and transfer
it onto a container, and said machines are often inserted in packaging lines
which for example comprise upstream a filling machine and a capping
machine.

Due to a malfunction of one of the upstream machines, it may happen
20 that a container is missing in the plurality that reaches the labeling machine
at high speed, and therefore the pan that should have accommodated the
missing container remains empty.

The packaging line does not stop and accordingly malfunctions on the
labeling machine occur.

25 **Disclosure of the Invention**

The aim of the present invention is to provide a labeling machine that
can ensure correct operation even if containers are missing on the feeding
line.

This aim is achieved by a machine for labeling by means of pre-
30 pasted labels printed on a ribbon, according to the invention, as defined in

the appended claims.

Brief description of the drawings

Further characteristics and advantages of the invention will become better apparent from the description of two preferred but not exclusive
5 embodiments thereof, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a schematic plan view of the machine according to the invention;

Figure 2 is again a schematic plan view of the machine according to
10 another embodiment.

Ways of carrying out the Invention

With reference to the figures, the reference numeral 1 designates a rotating carousel for supporting the containers to be labeled, which are fed by means of an input star conveyor 2 and evacuated by means of an output
15 star conveyor 3. Such carousel is provided with pans for supporting the individual containers which are suitably rotated, and the reference numeral 4 designates a pan that supports the container which, if it were present, would be ready to receive the corresponding label at the instant shown; the black coloring of the pan is intended to point out the fact that the container
20 is missing on the pan.

The labeling machine further comprises a drum 5, which cuts a ribbon 6 that reaches it by unwinding from a roll 7 by way of the action of a tensioner 8 and a feeder 9, in order to separate each individual label and transfer it to a corresponding container.

25 Considering the embodiment shown in Figure 1, a rotating roller 10 is provided, which is substantially in contact with the drum 5 downstream of the tangent position of the drum with respect to the rotating carousel. The roller 10 receives each label that has not found a corresponding container on the carousel 1, accommodating it on itself until
30 it stores even a considerable quantity of overlapping labels by way of the

contraction of volume that it can undergo, since it is made of a spongelike material or of elastic material.

The embodiment of Figure 2 provides for the presence of a rotating roller 11, which is provided with means adapted to move it from a position
5 in which it is spaced from the drum 5, not shown in the figure, to the operating position, shown in the figure, of substantial contact with such drum upstream of the tangent position of such drum with respect to the carousel.

The transfer of the roller 11 to the operating position, in which the
10 labels that would not find on the carousel 1 a corresponding container onto which to be applied are collected, is performed, by the means with which such roller is provided, following a command that arrives from a sensor, such as a photocell 12 when it detects the lack of a container.

The described invention is susceptible of numerous modifications and
15 variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

The disclosures in Italian Patent Application No. MN2008A000030 from which this application claims priority are incorporated herein by reference.

20 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. A machine for labeling by means of pre-pasted labels printed on a ribbon, comprising a rotating carousel (1) provided with pans (4) for supporting containers to be labeled, and a drum (5) for cutting and transferring each individual label onto the containers which, in the motion of the carousel (1), progressively face said drum (5), characterized in that it comprises a rotating roller (10;11), which is adapted to receive from said drum (5) each label designed to be applied to a container that is not present on the corresponding pan (4) of the carousel (1).
- 10 2. The machine according to claim 1, characterized in that the rotating roller (10) is arranged substantially in contact with the label cutting and transfer drum (5) downstream of the tangent position of said drum (5) with respect to the rotating carousel (1).
- 15 3. The machine according to claim 1, characterized in that the rotating roller (11) is provided with means adapted to move it from a position in which it is spaced from the label cutting and transfer drum (5) to a position of substantial contact with said drum upstream of the tangent position of said drum (5) with respect to the rotating carousel (1), said means being adapted to be activated as a consequence of a command that arrives from a sensor (12) that detects the lack of a container on the corresponding pan of the carousel.
- 20 4. The machine according to one or more of the preceding claims, characterized in that the rotating roller (10) is made of spongelike material.
- 25 5. The machine according to one or more of the preceding claims, characterized in that the rotating roller (10) is made of elastic material.

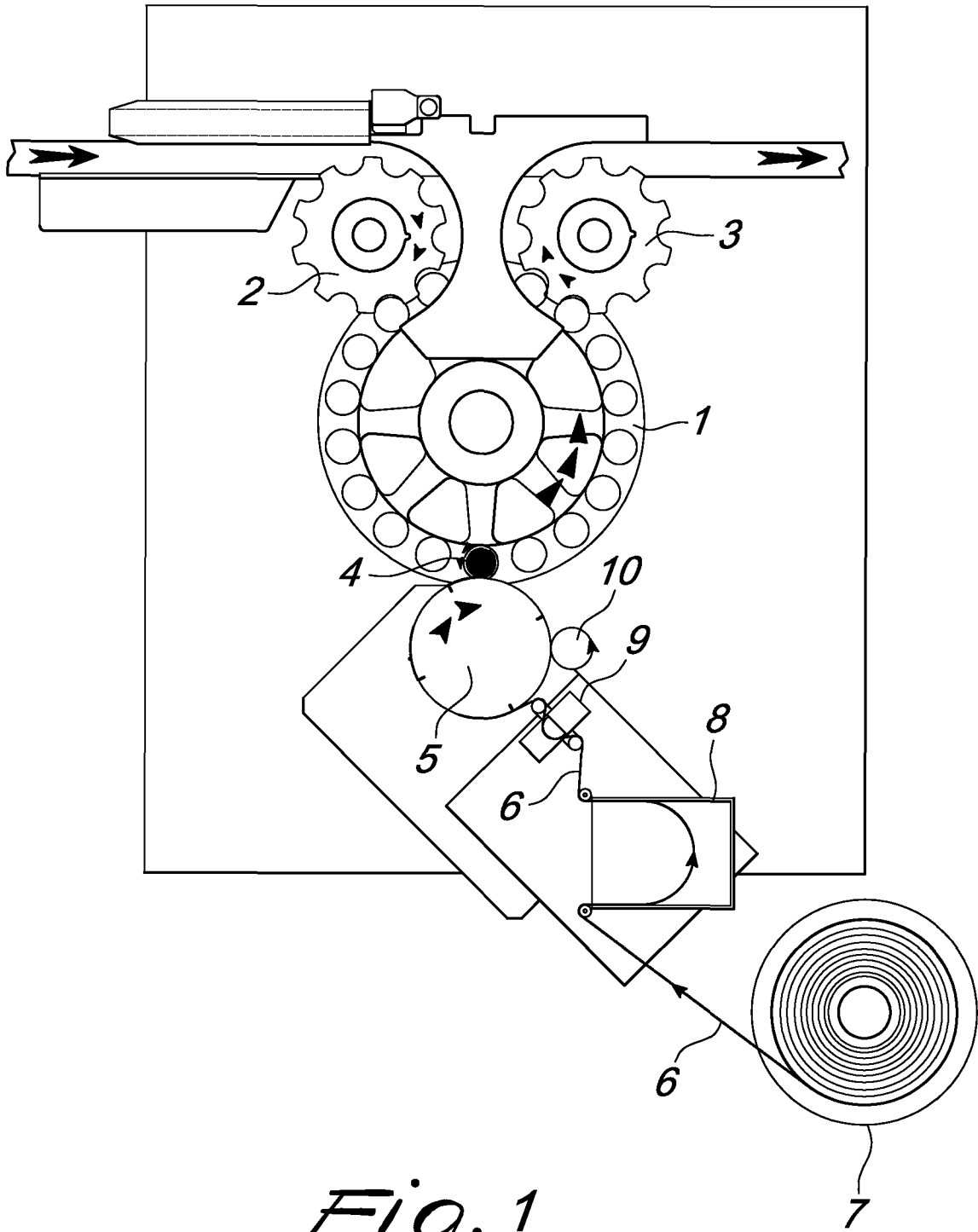


Fig. 1

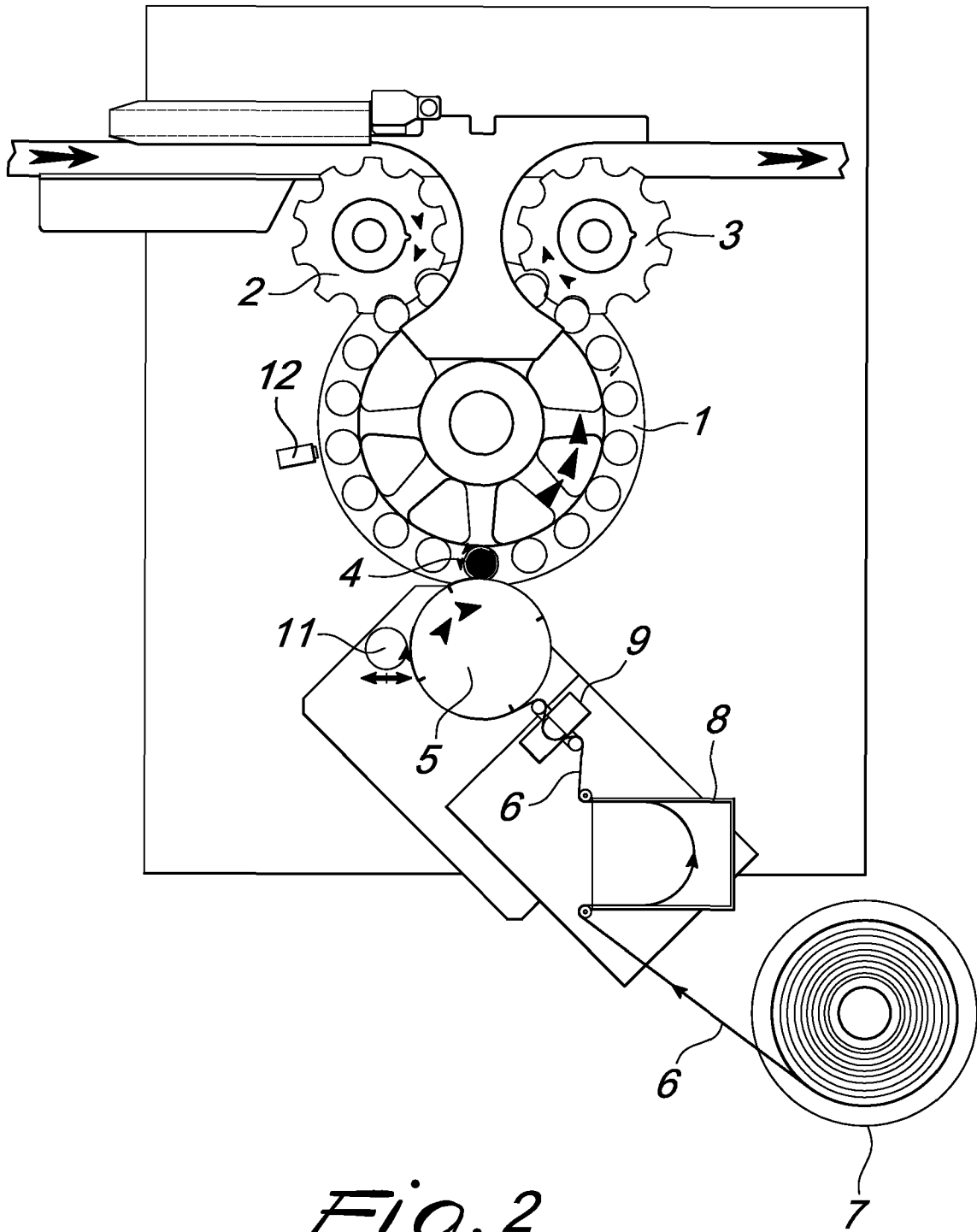


Fig. 2

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. B65C9/40 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) B65C		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	DE 23 11 766 A1 (KRONSEDER HERMANN) 10 October 1974 (1974-10-10) claim 1	1
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Date of the actual completion of the international search	Date of mailing of the international search report	
21 April 2010	28/04/2010	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Martínez Navarro, A	

INTERNATIONAL SEARCH REPORT

International application No
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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