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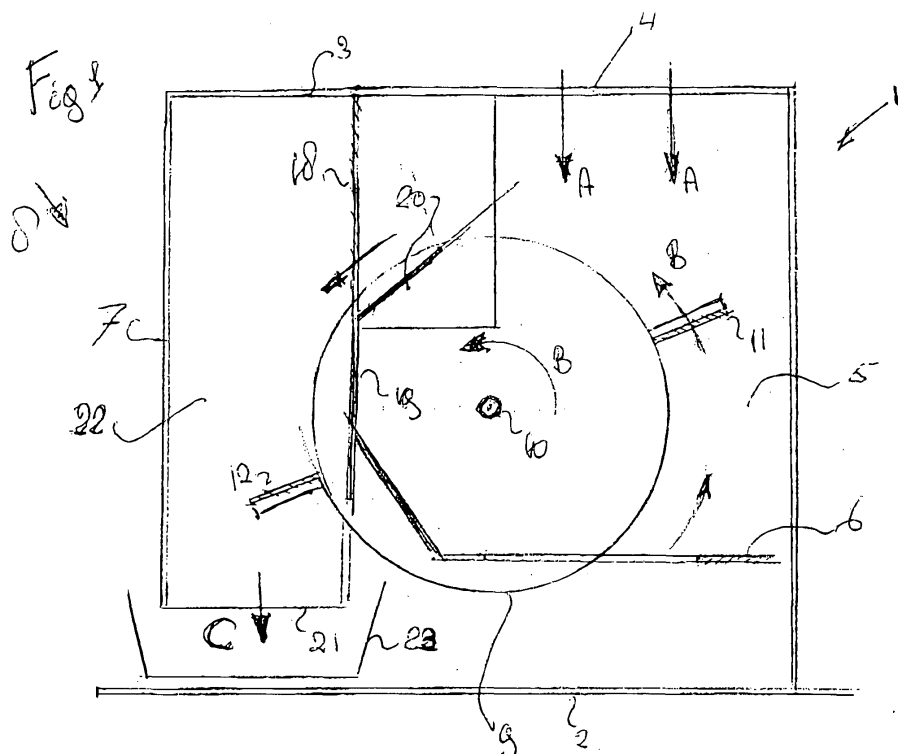
(54) **Dispenser for baking products**

(57) The invention relates to a packaging and sales device for fresh bakery products, such as hot rolls, which device is provided with a supply device, a stocking device, a conveyer, and a removal device to a packaging and sales device.

The object of the invention is providing a simplified embodiment of the stocking and transport device, with a small width of this device, which simplifies the use and mounting and/or building-in in bakery shops and bakery departments of supermarkets. This object is reached by

the invention, in that

- a) the supply device for rolls leads to a funnel shaped supply container in which the rolls are randomly dropped on a stack;
- b) the conveyer is formed by a circle round blade wheel, which is mounted transversely to the front of the sales showcase , and
- c) the blade wheel is rotatable around a horizontal shaft, and at command makes one or more rotations or part of a rotation.



Description

[0001] The invention relates to a packaging and sales device for fresh bakery products, such as rolls, which device is provided with a supply channel, a stocking device, a conveyer, and a removal device to a packaging and sales device.

A device of this type is described in European patent application EP-A 1.612.746 of applicant.

[0002] This device has as sales device an electronic sales unit having an interactive touch screen, that on command releases one or more rolls from the stock in the helically shaped vertical conveyor to a packaging device, so that the rolls are no longer touched by human hands and are conditioned and packed completely hygienic.

[0003] On account of the in plan view round, helically shaped conveyor this device has a relatively large width, whereas for the promotion of the downward transport preferably a high frequent vibration device has been mounted.

[0004] The object of the invention is providing a simplified embodiment of this stocking and transport device, having a small width of this device, which simplifies the use and mounting and/or building in into bakery shops and bakery departments of supermarkets.

[0005] This object is reached by the invention, in that

- a) the supply device for rolls leads to a funnel shaped supply container, in which the rolls are randomly dropped on a stack;
- b) The conveyor is formed by a circle round blade wheel, which is mounted in a transverse direction to the front of the sales display case, and
- c) Which can rotate around a horizontal axis and on command makes one or more rotations or part of a rotation.

[0006] According to a preferred embodiment of the invention the lower part of the blade wheel extends downwardly through the perforated bottom of the supply container.

[0007] According to a advantageous embodiment of the invention the blades are furcated on the outer ends, in which the three teeth can move through the corresponding two teeth of the bottom of the container in order to scoop a roll from the stack in the supply container.

[0008] According to another suitable embodiment of the invention two blades have been mounted radially projecting diametrically opposite to each other on the blade wheel.

Description of figures:

[0009] The invention will now further be elucidated referring to the accompanying drawing of an embodiment.

[0010] Fig. 1 shows a side view in cross section of a preferred embodiment of the device according to the in-

vention.

[0011] Fig. 2 shows a plan view of a detail of the bottom 6 of the device 1.

[0012] The packaging and sales device comprises a show case, generally indicated with 1, provided with a bottom 2, an upper wall 3 having an open inlet 4 for bakery products, such as freshly baked rolls (not shown), having for instance dimensions with a length of 12 cm, width of 8 cm, height of 5cm.

It is evident that also bakery products with other dimensions, after adaptation of the device can be processed. The bakery products drop according to the arrows AA from a supply device (not shown) in the funnel shaped supply container 5, having a bottom 6 and form a random stack (not shown) there.

[0013] The showcase 1 has a front wall 7, which is preferably transparent, which wall is adjacent to the sales space, generally indicated 8, to which the public has access.

[0014] Inside the inner space of the funnel shaped supply container 5 a circle round shaped blade wheel 9 is mounted transversely to the front wall 7 and can rotate around a substantially horizontal shaft 10 in the direction of the arrow 3. This blade wheel 9 has been provided with two radially projecting blades 11 and 12 that are mounted on the outer circumference. These two blades 11,12 have been mounted diametrically opposite each other.

[0015] It is evident that also other numbers of blades can be applied, which are preferably regularly divided around the circumference of the blade wheel 9.

[0016] The blades 11,12 have in plan view the shape of a three pronged fork with two outer prongs 13,14 and a middle prong 15.

[0017] The bottom 6 of the funnel has two projecting, fixed prongs 16,17, between which the prong 15 can move through, whereas the outer prongs 13,14 of the blade 11 can move between the prongs 16,17 and the boundary of the bottom 6.

[0018] The housing 1 has on both sides inwardly projecting intermediate walls 18 having a through passage 19 for the wheel 9 with its blades 11,12. On both sides of the wall 18 an inwardly projecting slide of blade 20 has been mounted, which covers a part of the circumference of the wheel 9.

[0019] Between the front wall 7 and the intermediate wall 18 a shaft 22 is formed having at the lower side an opening 21 with an outlet C.

A container 22 is placed on the bottom 2 below the outlet C which is accessible for the public.

[0020] The operation of the device is as follows:

- a) The bakery products are brought into the device 1 through the inlet 4, vide the arrows AA, and enter into the funnel 5.
- b) The assemble on the bottom 6 and here form a random stack;
- c) The blade wheel 9 turns on command around the

shaft 10 around at least 360° in the direction of the arrow 3.

d) When passing the slide of blades 20 the roll is pushed of the blade 11 or 12 and drops into the shaft 22 and through the outlet C in the basket 23.

e) The blades 11,22 can hereby move with the prongs 13,14,15 between the prongs 16,17 of the bottom 6 and one of the blades 11,12 scoops from the stack a roll and transports this in an upward direction.

f) The client removes the container 23, this can also be closed, provided with a sticker with barcode one and the other according to EPA A 1.612.746.

6. Device according to one or more of the claims 1 - 5 , **characterized in that**, two blades (11,12) mounted diametrically opposite each other and radially projecting from the blade wheel (9).

7. Device according to one or more of the claims 1 - 6 , **characterized in that**, at the packaging device a sales device is mounted according to EP- A- 1.612.746.

Claims

1. Packaging and sales device for fresh bakery products, such as hot rolls, which device is provided with a supply device, a conveyer and a removal device to a packaging device, **characterized in that**

a) the supply device for rolls leads to a funnel shaped supply container (5), in which the rolls are randomly dropped on a stack;

b) the conveyer is formed by a circle round blade wheel (9), which is mounted transversely to the front (7) of the sales showcase (1), and

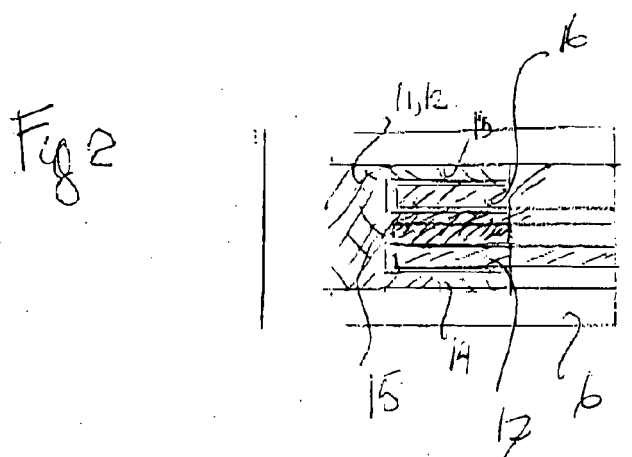
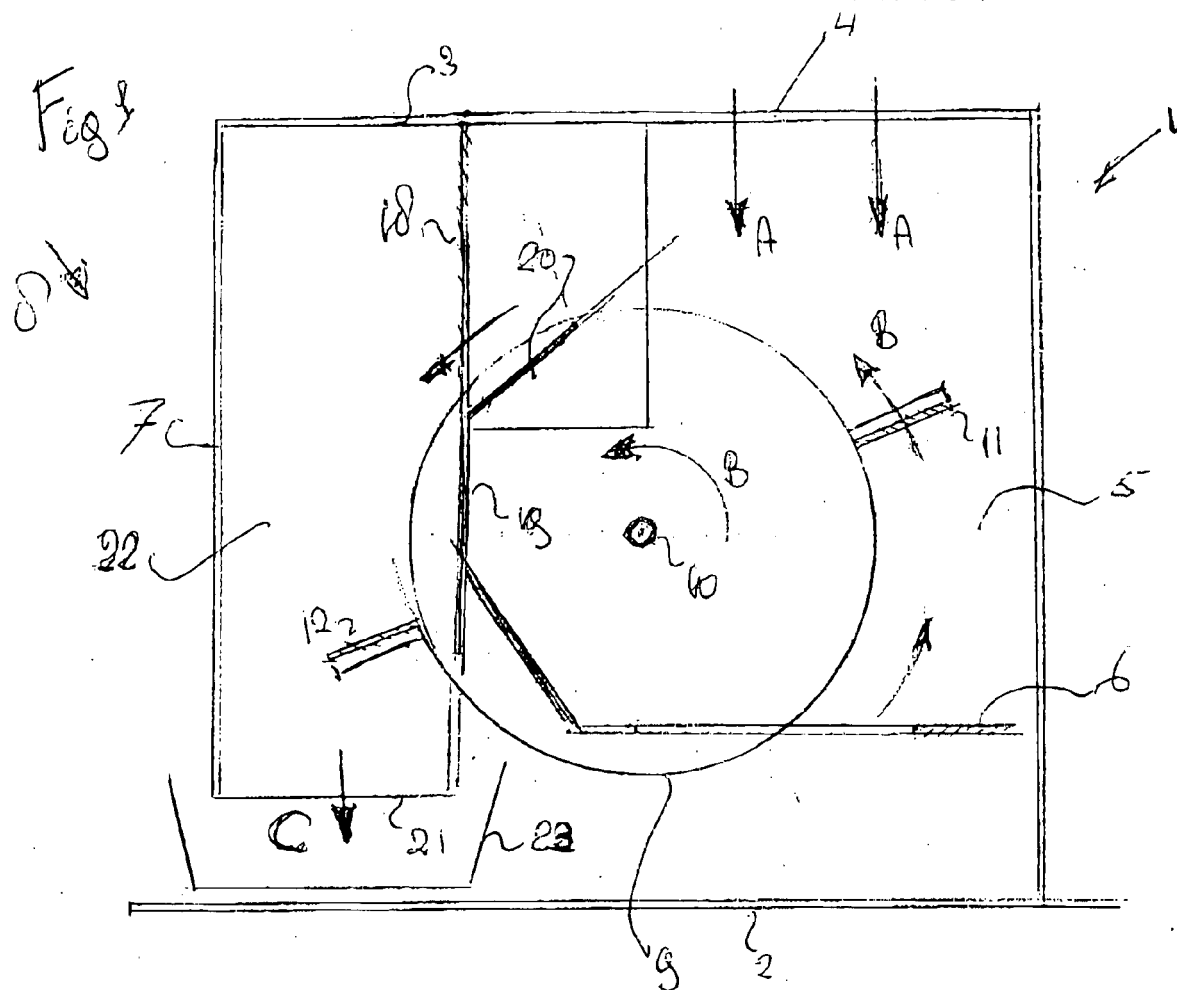
c) the blade wheel (9) is rotatable around a horizontal shaft (10), and at command makes one or more rotations or parts of a rotation.

2. Device according to claim 1, **characterized in that**, the blade wheel (9) is provided at its circumference with a number of radial blades (11,12), which each are able to scoop a roll from the stack in the supply container (5) at the side of the wheel (9) which is opposite to the delivery side of the device and transport it upwardly in an arc of a circle.

3. Device according to claim 2, **characterized in that**, during the downward movement of the blade wheel (9) the roll is thereafter pushed from the blade (11,12), after which it can fall into the removal device (22), in which it is removed to the packaging device (23).

4. Device according to claims 1- 3, **characterized in that**, the lower part of the blade wheel (9) extends downwardly through the perforated bottom of the supply container (1).

5. Device according to one or more of the claims 1- 4, **characterized in that**, the blades (11,12) have three prongs (13,14,15) at the outer ends which can move between corresponding two prongs (16,17) of the bottom (2) of the container (1) in order to scoop a roll from the stack in the supply container (4).





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 07 5169

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			G07F
Place of search		Date of completion of the search	Examiner
The Hague		10 April 2006	Diepstraten, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document 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 & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P4/C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 07 5169

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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10-04-2006

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