No. 864,921. PATENTED SEPT. 3, 1907.

W. RÜPRICH.

LABELING MACHINE.

APPLICATION FILED AUG. 29, 1906.

Fig. 1.

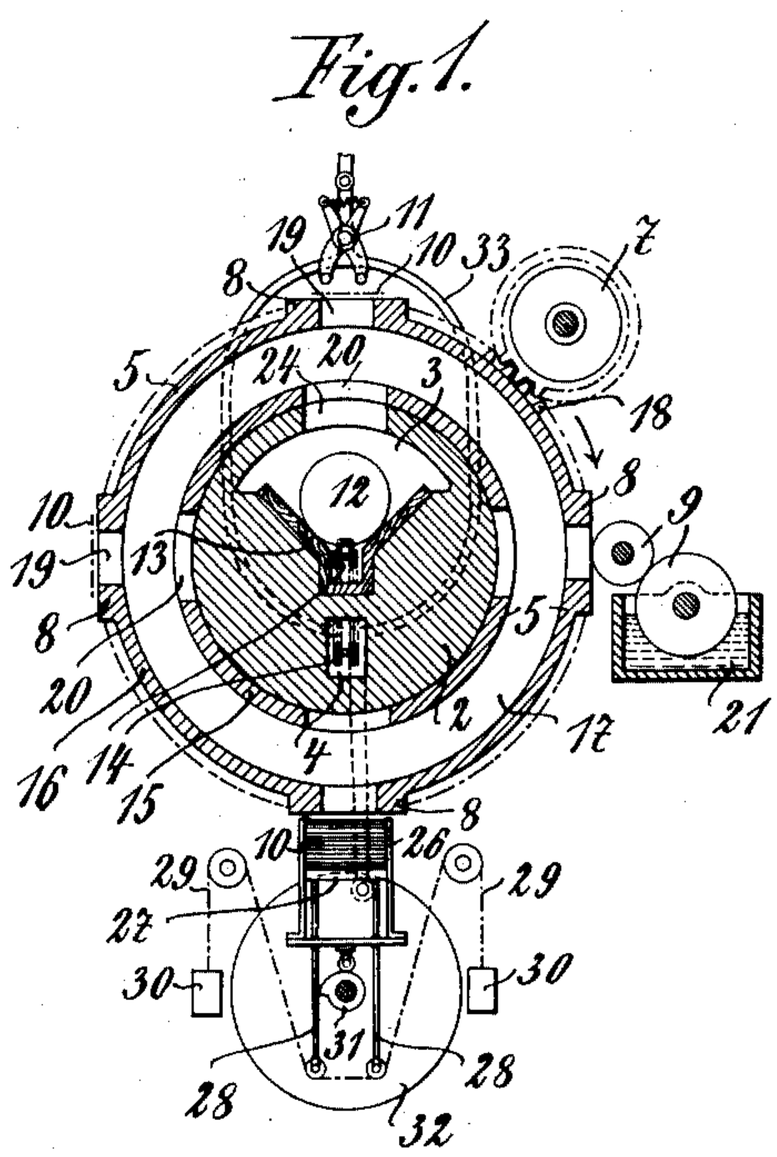
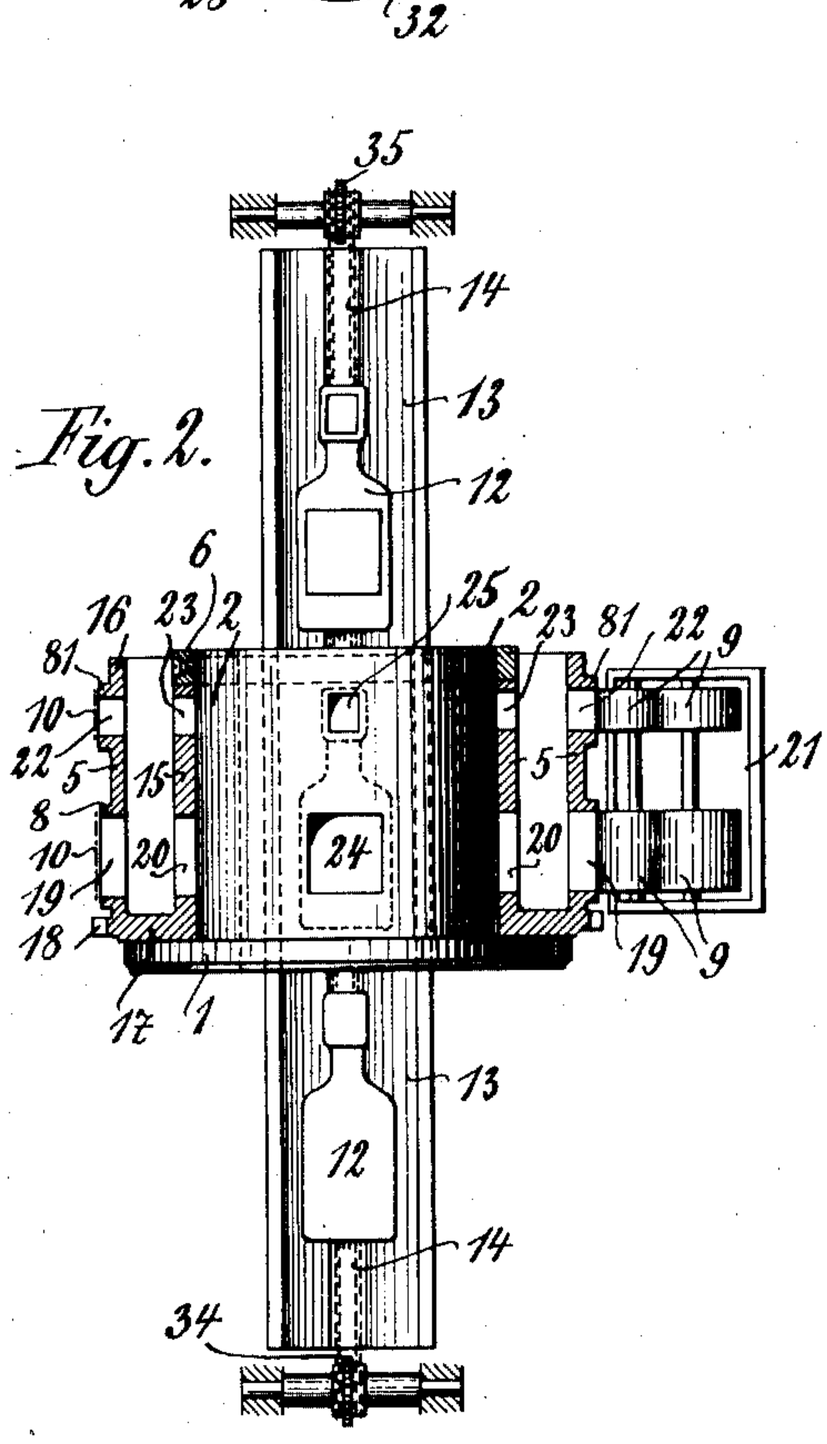


Fig. 2.



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UNITED STATES PATENT OFFICE.

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LABELING-MACHINE.

No. 864,921. Specification of Letters Patent. Patented Sept. 3, 1907.

Application filed August 29, 1906. Serial No. 332,420.

To all whom it may concern:

Be it known that I, WILLY RÜPRICH, engineer, a subject of the King of Prussia, residing in Dresden-Trachau, Saxony, German Empire, Schützenhofstrasse 42, have invented certain new and useful Improvements in Labeling-Machines, of which the following is a specification.

This invention relates to labeling machines of the well-known type in which the open or perforated label-carriers or pickers are brought step by step into those positions in which they are provided with adhesive material, are presented with the label, and are led over the object to be labeled, after which a grip-device or pusher descending from above presses the label through the open portion or perforation of the carrier or picker on to the object to be labeled. A labeling machine of this type is described in the specification accompanying my United States Patent application Serial Number 324,990 filed the 6th of July, '06.

A machine according to the present invention is in many respects similar to the machine illustrated and described in the said specification but the label picker carrier and the support for the objects to be labeled are materially different from those of the machine described in said specification. According to the present invention said support not only supports the objects to be labeled but forms a bearing for the carrier which instead of being in the form of an endless chain running round two chain wheels is formed as a rigid annular member revolubly mounted on said support which it surrounds.

The invention will now be described with reference to the accompanying drawings which diagrammatically illustrate one embodiment by way of example.

Figure 1 is a diagrammatic part sectional side elevation, and Fig. 2 is a diagrammatic part sectional plan.

2 is the support for the objects to be labeled. It is in the form of a cylindrical core which is fastened to an end plate 1, the latter being fixed to the frame (not shown) of the machine in any suitable manner. Said core and plate are provided with passages 3 & 4, the former being open above through two holes 24, 25. The passage 3 contains a certain length of the channel 13 along which the objects to be labeled are fed forward. Upon and around the core 2 the carrier 5 is revolubly mounted. Said carrier is in the form of an annular member consisting of an inner sleeve or cylinder 15 and an outer sleeve or cylinder 16, and an end portion 17. The inner sleeve 15 is adapted to be slid over the core 2 until the end portion 17 abuts against the plate 1. The carrier can then be prevented from coming off by means of the ring 6 adapted to be screwed or otherwise fixed to the core 2. The carrier is thus able to revolve on said core between the end portion 17 and said ring 6.

The outer sleeve 16 is provided with teeth 18 adapted to engage with the toothed wheel 7 which may be driven by any suitable means in order to revolve the carrier. The outer sleeve 16 of the carrier is provided at four equidistant parts with raised or thickened portions 8 which form the larger label-pickers and with similar portions 81 forming the smaller pickers. Said thickened portions 8 and 81 are provided with holes 19 and 22 respectively and opposite said holes 19, 22 similar holes 20 and 23 respectively are provided in the inner sleeve 15. As shown in Fig. 1 the widths of the holes 20, 23, may be respectively equal to the widths of the openings or holes 24, 25 in the core 2 above the passage 3.

9 are rollers for applying adhesive material to the pickers, 21 being the trough containing adhesive material.

10 are the labels and 26 is one of the label-holders with a bottom in the form of a plunger 27 continually pressed upwards by the rods 28, cords 29 and weights 30.

31 is a cam which acts upon and raises the holder 26 at the required times.

32 is a crank disk connected through the rod 33, indicated in dotted lines with the grip-devices or pushers 11, only one of which is shown.

The channel 13 for the objects, such as bottles 12, to be labeled projects out on both sides of the core 2. Said bottles are fed forwards by the endless chain 14 passing round the chain wheels 34, 35 supported on the frame, not shown. The upper portion of the chain travels in one direction through the passage 3 the lower portion in the opposite direction through the passage 4 in the core 2.

The manner in which the machine operates is as follows:—Each pair of pickers, consisting of one large one 8 and one small one 81, on passing the rollers 9 is provided with adhesive material. On the carrier being rotated 90° each of said pickers is presented with a label. After turning 90° more the labels may be printed if desired. After a further 90° said labels come into position under the pushers which descend and push the labels through the holes in the sleeves of the carrier and in the core on to the bottle to be labeled. The bottle when labeled is fed forwards and another bottle ready to be labeled is brought into position under the pushers, the feeding forward of the bottles being simultaneous with the intermittent forward rotation of the carrier.

It is to be understood that the embodiment shown in the drawings is given merely by way of example. The carrier can vary considerably in form, as can also the support on which it is mounted and through which the objects to be labeled pass, without exceeding the scope of the invention. For instance, the channel for supporting the objects to be labeled may be quite separate

from the core on which the carrier rotates so long as said channel passes through said carrier. Or the objects to be labeled might be directly supported in the interior of the core, the feature of the combination forming the subject-matter of the present invention being the rigid revoluble picker carrier and means for feeding forward the objects to be labeled through the circular path described by the pickers on the carrier.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a labeling machine of the type described, the combination of a reciprocating label-holder, means for intermittently feeding forward the objects to be labeled into the place to be occupied by them while being labeled, means for supporting said objects while being labeled, a rigid revoluble carrier provided with label pickers, said carrier being so arranged that on rotating the pickers describe paths around the place where the object is situated while being labeled, and the carrier and pickers being provided with holes through which the labels can at the proper time be pushed towards the object to be labeled, means for supporting said carrier, means for intermittently revolving said carrier to bring each label-picker in turn first into a position immediately opposite said reciprocating label-holder and subsequently opposite the object in position to be labeled, means for supplying adhesive material to the label-pickers on their way to said label-holder, and means for removing the label from the label-picker opposite the object in position to be labeled and applying it to the same.

2. In a labeling machine of the type described, the combination of a reciprocating label-holder, means for intermittently feeding forward the objects to be labeled into the place to be occupied by them while being labeled, means for supporting said objects while being labeled, a rigid revoluble carrier having its outer surface raised at intervals to form label pickers, said carrier being so arranged that on rotating the pickers describe paths around the place where the object is situated while being labeled, and the carrier and pickers being provided with holes through which the labels can at the proper time be pushed towards the object to be labeled, means for supporting said carrier, means for intermittently revolving said carrier to bring each label-picker in turn first into a position immediately opposite said reciprocating label-holder and subsequently opposite the object in position to be labeled, means for supplying adhesive material to the label-pickers on their way to said label-holder, and means for removing the label from the label-picker opposite the object in position to be labeled and applying it to the same.

3. In a labeling machine of the type described, the combination of a reciprocating label-holder, means for intermittently feeding forward the objects to be labeled into the place to be occupied by them while being labeled, means for supporting said objects while being labeled, a rigid revoluble annular carrier provided with label pickers, the carrier and pickers being provided with holes through which the labels can at the proper time be pushed towards the object to be labeled, a cylindrical core around and upon which the carrier is revolubly supported, said core having a longitudinal passage with an opening above through which passage the objects to be labeled are fed into position under said opening where they are labeled, means for intermittently revolving said carrier to bring each label-picker in turn first into a position immediately opposite said reciprocating label-holder and subsequently opposite said opening in said passage through the core under which opening the object is in position to be labeled, means for supplying adhesive material to the label-pickers on their way to said label-holder, and means for removing the label from the label-picker opposite the object in position to be labeled and applying it to the same.

4. In a labeling machine of the type described, the combination of a reciprocating label-holder, means for intermittently feeding forward the objects to be labeled into the place to be occupied by them while being labeled, means for supporting said objects while being labeled, a rigid revoluble annular carrier in the form of inner and outer concentric cylindrical sleeves, 15, 16 interconnected by an end portion 17, the outer sleeve having thickened portions 8, 81 forming pickers provided with holes 19, 22 and the inner sleeve having holes 20, 23 corresponding to the holes 19, 22, a cylindrical core around and upon which the carrier is revolubly supported, said core having a longitudinal passage with two openings above, through which passage the objects to be labeled are fed into position under said openings where they are labeled, means for intermittently revolving said carrier to bring each label-picker in turn first into a position immediately opposite said reciprocating label-holder and subsequently opposite its corresponding opening in said passage through the core under which openings the object is in position to be labeled, means for supplying adhesive material to the label-pickers on their way to said label-holder, and means for removing the labels from the label-pickers opposite the object in position to be labeled and applying them to the same.

5. In a labeling machine, the combination of a carrier for holding the article to be labeled, a label carrier having one or more openings therethrough, means for rotating one of said carriers to have the label in position to be applied to the article, means for applying adhesive material, and means for passing the label through each of said openings and applying it to the article.

6. In a labeling machine, the combination of label supply means, a carrier for holding the article to be labeled, a label carrier having openings therethrough, means for rotating one of said carriers to have the label in position to be applied to the article, means for applying adhesive material, and means for pushing the label through each of said openings in the carrier and on to the article to be labeled.

7. In a labeling machine, the combination of label supply means, a holder for the article to be labeled, a rotatable label carrier encircling said article holder and having openings therethrough, means for rotating said carrier to bring the label into position to be applied to the article, means for pushing the labels through said openings, and means for applying adhesive material.

8. In a labeling machine, the combination of label supply means, a holder for the article to be labeled, a rotatable label carrier encircling said article holder and having openings therethrough, means for rotating said carrier to bring the label into position to be applied to the article, means for pushing the labels through said openings, means for applying adhesive material, and means for feeding the article to the article holder.

9. In a labeling machine, the combination of a reciprocating label supply means, means for intermittently feeding forward the article to be labeled, a rotatable carrier encircling the article when the latter is in position to be labeled and provided with label pickers having openings therethrough, means for applying adhesive material to the label pickers on their way to the label supply means, and means for removing the label from the label picker opposite the article to be labeled and applying it to the same.

10. In a labeling machine, the combination of a reciprocating label supply means, means for intermittently feeding forward the article to be labeled, a rotatable carrier encircling the article when the latter is in position to be labeled and provided with label pickers having openings therethrough, means for applying adhesive material to the label pickers on their way to the label supply means, means for removing the label from the label picker opposite the article to be labeled and applying it to the same, and means for intermittently rotating the label carrier.

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