No. 620,981. Patented Mar. 14, 1899.

C. G. SEVERIN.

LABELING APPARATUS.

(Application filed Sept. 8, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

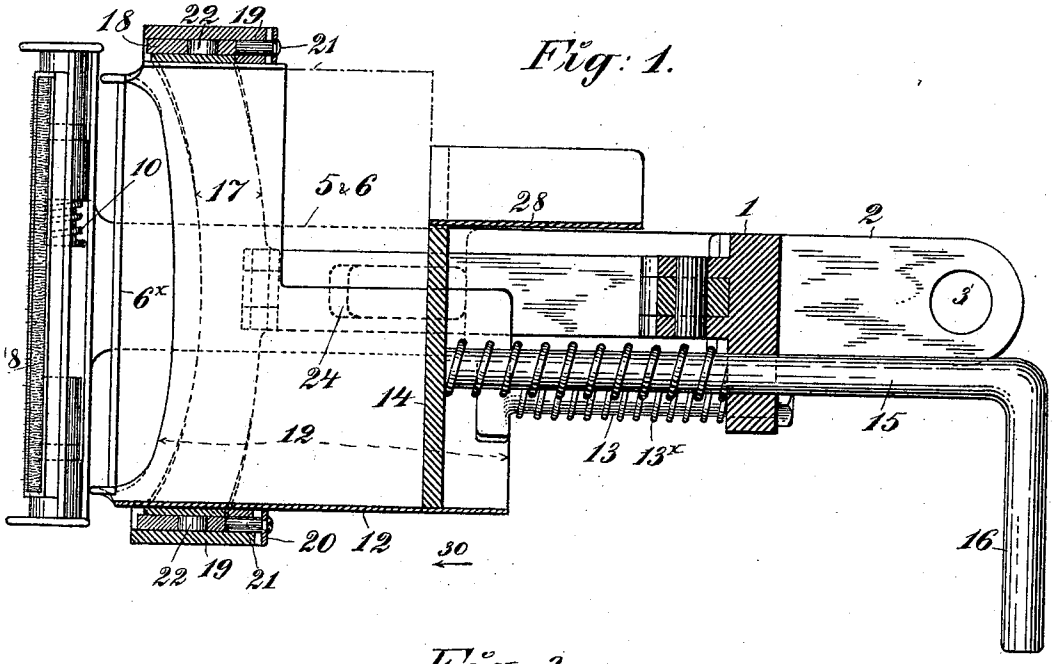
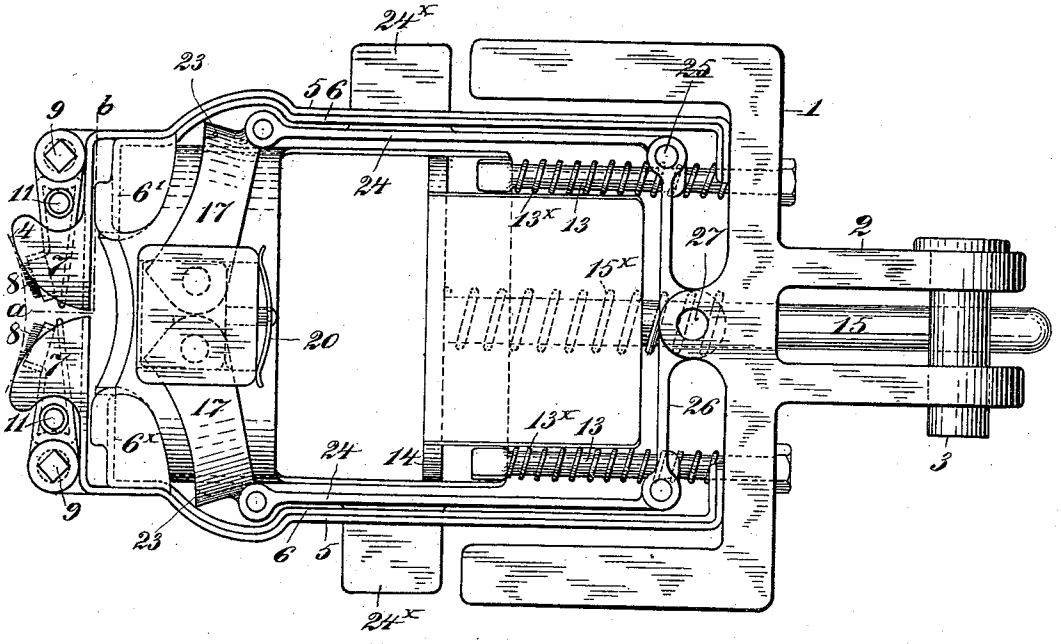


Fig. 3.



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Fig. 2.

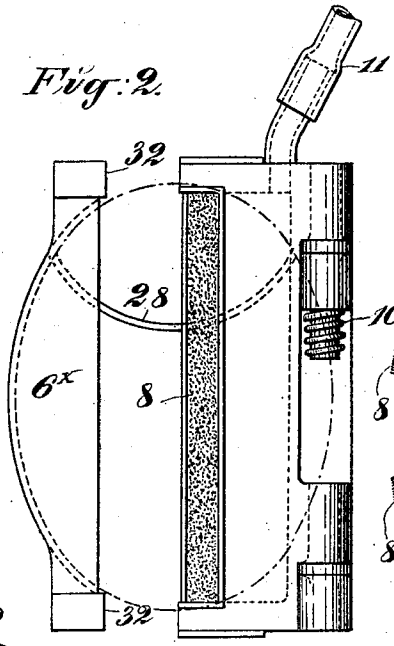


Fig. 5.

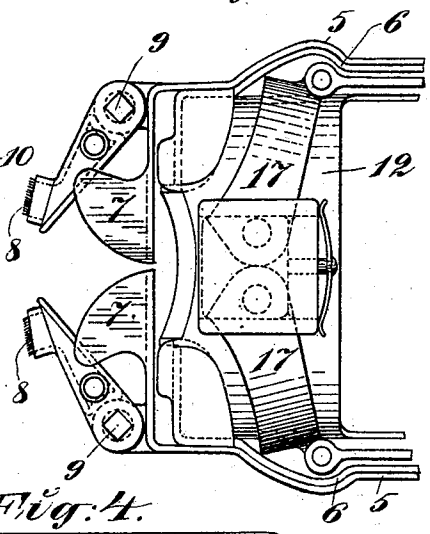
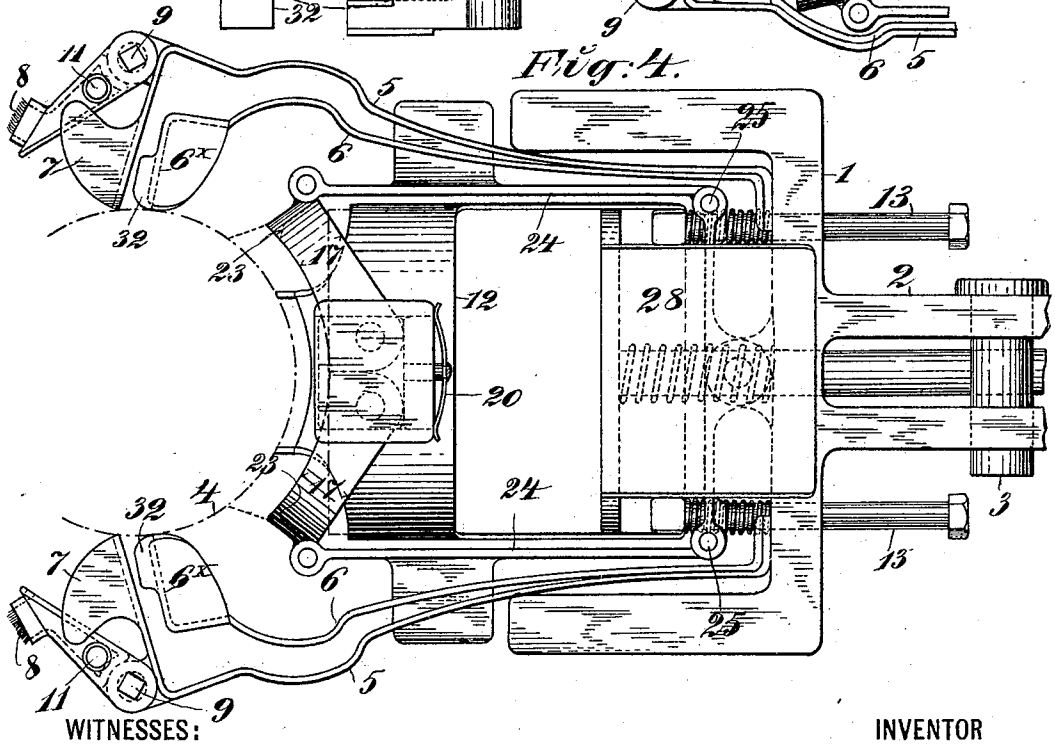


Fig. 4.



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UNITED STATES PATENT OFFICE.

CONRAD GEORG SEVERIN, OF MOTALA VERKSTAD, SWEDEN, ASSIGNOR TO GUSTAF GEORG GEORGII, OF SUNDSVALL, SWEDEN.

LABELING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 620,981, dated March 14, 1899.

Application filed September 8, 1898. Serial No. 690,509. (No model.)

To all whom it may concern:

Be it known that I, CONRAD GEORG SEVERIN, engineer, a subject of the King of Sweden and Norway, and a resident of Motala Verkstad, in the Kingdom of Sweden, have invented certain new and useful Improvements in Labeling Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an apparatus by means of which labels can be attached to bottles and other objects. The apparatus may be easily combined with some machine or other in which the object to be labeled is operated on for some other purpose—for instance, in the case of bottles with a corking-machine—so that both will coöperate—*i. e.*, bottles are provided with cork and label. In the following, however, the labeling apparatus only is described. The latter comprises a label-magazine fixed on the ends of sliding rods, so that it can move in relation to the adjoining parts, the pressure device for pressing the label onto the bottle, retainers which are adapted on the affixing of the label to return the remaining labels in the direction of the magazine, and the brushes for supplying the bottle with the paste required for fixing the labels. The various parts are brought into action by approaching the apparatus to and pressing it against the bottle and by subsequently withdrawing it from the latter.

Figure 1 is a longitudinal vertical mid-section of the apparatus. Fig. 2 is a front view of the same, partly in section, on line *a b* in Fig. 3. Figs. 3 and 4 are side elevations, the former showing the apparatus in the first position for applying a label to a bottle and the latter showing the positions of the parts after the label has been applied and before withdrawal. Fig. 5 shows the normal positions of the paste-applying brushes.

The frame of the apparatus consists of a rigid cross-head 1, provided with a lug 2, with a through-bolt 3 for attaching the apparatus to a lever or the like, (not shown in the drawings,) by means of which it can be moved back and forth toward and away from the bottle. The latter is indicated by a circle 4 in broken lines in Figs. 3 and 4. There are attached to the cross-head 1 four spring-arms 5 5 and 6 6, two located at one side and two at the other side of the apparatus and one of each pair situated closely inside the other. The free ends of the exterior arms are bent at an angle in toward the center of the apparatus and provided at the outside with tongues or projections 7, which are cut off obliquely, and with brushes 8. The latter are pivoted on the arms 5 by means of the pins 9 and incline forward normally, as in Fig. 5, so as to be brought in contact with the bottle when the apparatus is advanced toward it. A spring 10, wound around the pivot-pin 9, holds the brush yieldingly in the position shown in Fig. 5 in relation to the arm 5. The body or back of each brush is formed by a hollow arm, into which leads a hose or tube 11 for supplying paste, mucilage, or the like to the brushes. The forward ends of the arms 6 are likewise bent at an angle in toward the center of the apparatus, so as to form retainers for holding the labels, as will be described later on. Between the arms 6 6 the label-magazine 12 is situated. This magazine consists of a short sheet-metal tube of oval or other shape, according to the form of the labels, said tube at the top and bottom being prolonged somewhat in the forward direction and at the bottom being prolonged somewhat in the rearward direction. The label-magazine is carried on the rods 13, which can slide through the cross-head 1 and are surrounded by spiral springs $13^{\times}$, keeping the magazine pressed forward. In the magazine is arranged a sliding follower 14, which is fixed to the push-rod 15, passing through the cross-head 1, and is kept pressed forward by the spiral spring $15^{\times}$, wound around the said rod. The push-rod 15 is bent over at the back, so as to form a handle 16 to be used when the follower 14 is to be withdrawn. At the forward end of the apparatus there are two label-placers in the form of bows 17 17, which together form a ring embracing the forward end of the label-magazine. The bows have their ends attached to small slides 18, arranged in guides 19, their upper ends being situated at the top and their lower ends at the bottom of the label-magazine.

Each slide 18 can slide a slight distance along the magazine and is kept withdrawn by

a spring 20, through which passes a pin 21, projecting from the slide. For the sake of clearness the pivot-pin 22 of the bows is shown in Fig. 1, although the remainder of the section is made through the central plane of the apparatus. At the sides of the apparatus the front edges of the bows are provided with an inwardly-curved edge 23, while the backs of the bows are jointed to arms 24, which by means of the pin 25 are attached to the ends of an equalizing-lever 26, fulcrumed on the cross-head 1 on a pin 27. The arms of the equalizer 26 are somewhat elastic. The arms 24 are guided by the projections $24^{\times}$, passing through slots in the arms 5 6. The labels, which are placed upright in the magazine 12, are held compressed to a bundle or pack between the retainers $6^{\times}$ of the arms 6 and the follower 14, owing to pressure of the spring $15^{\times}$. When the magazine is to be filled, the follower 14 is withdrawn and the fresh supply of labels is deposited behind those previously in the magazine. In order to facilitate this operation, the follower is provided at its upper edge, which is cut out to correspond to the rounded edge of the label, with a backwardly-extending plate 28, which is shaped in the same manner aforesaid and on which the labels are first placed and made to occupy the same relative position, all the labels being subsequently pushed down in front of the follower 14, previously withdrawn.

When the apparatus is inactive, its parts occupy the position shown in Fig. 3, with the difference only that the brushes have the position shown in Fig. 5. When the apparatus is moved in the direction of the bottle, by moving the lever or the like to which the apparatus is attached in the said direction, as indicated by the arrow 30, (seen in Fig. 1,) the bottle is at first struck by the brushes, which move to the position shown in Fig. 3. When the apparatus advances farther in the direction of the arrow 30, the arms 5 5 are at first moved apart by the bottle by the tongues 7 7 sliding outward in contact with the round surface of the bottle, the brushes meantime applying paste or the like to the bottle, and subsequently the arms 6 6 are spread apart in the same manner, the labels being thereby caused to bear on the bottle along their longitudinal axis, while the labels at their edges (at the ends of their transverse axis) remain free. The label-magazine is now arrested and remains stationary, whereas the cross-head 1 advances still farther, causing the bows 17 17 to swing forward, the latter being thus finally brought in contact with the labels with their edges 23 and causing a number of the foremost of them to bend in a semicircle close to the bottle. The foremost label is thus pressed onto the now pasted bottle, to which it adheres, and the parts of the apparatus assume the position indicated in Fig. 4. The apparatus now withdraws in a direction opposite that indicated by the arrow 30. The cross-head then withdraws the bows 17 17, and the labels situated in front of the bows by their resiliency resume their plane form, excepting the foremost one, which has been fixed to the bottle. After the bows follow the brushes, which drag along the bottle with their backs in contact with it, thus not disturbing the label pasted on, but instead affixing it still better by their pressure, and also the label-retainers 6 $6^{\times}$. The latter slide on the bottle by means of their rounded projections 32, situated outside of the edges of the label affixed, so that the label is left undisturbed by them. Finally the retainers 6 $6^{\times}$ enter with their edges $6^{\times}$ in front of the straightened labels, between the latter and the bottle. When the apparatus is subsequently withdrawn entirely, the labels will be held between the retainers and the follower 14 and all the parts will resume the position shown in Fig. 3, the brushes, however, occupying the position shown in Fig. 5.

It is evident that instead of moving the apparatus toward the bottle this latter can be moved toward the apparatus.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a labeling apparatus, the combination with a carrying-frame, a label-magazine mounted slidably therein and backed by springs, the said springs, the spring-follower in the magazine, the label-retainers provided with spring-arms attached to the frame, the hinged label-placers 17, embracing the magazine, and the links and equalizer connecting said label-placers with the frame, of the spring-arms 5, attached to the frame, and the paste-applying brushes 8, mounted on the inturned ends of the respective arms 5, substantially as and for the purpose set forth.

2. In a labeling apparatus, the combination with means substantially as described for applying the label to the pasted surface, of the means for applying the paste, comprising the spring-arms 5, 5, having inturned ends, the brushes 8, 8, having their handles hinged to the respective arms 5, and springs adapted to hold said brushes yieldingly in a forwardly-inclined position, substantially as and for the purposes set forth.

3. In a labeling-machine, the combination with a frame 1, a magazine 12 mounted slidably therein and provided with guide-rods 13, which play through the frame, the springs $13^{\times}$ on said rods, and the spring-follower in the magazine, of the spring-arms 6, 6, at the respective sides of the magazine and attached to the frame, said arms being provided each with a label-retainer $6^{\times}$, having a rounded projection 32, label-placers carried by the frame and adapted to apply the label to a rounded surface, and automatic means carried by the frame for applying paste to the surface before the label is applied, substantially as set forth.

4. In a labeling apparatus, the combination with a frame, and means carried by the frame

for retaining, setting free and bending the labels about the rounded surface, of a magazine 12, mounted slidably in the frame, springs behind said magazine, the follower 14, in the magazine, said follower being cut away at its upper edge and provided thereat with a rearwardly-extending plate 28, the push-rod 15, on the follower, said rod having an operating-handle 16, and the spring $15^{\times}$, on said rod back of the follower, substantially as set forth.

5. In a labeling apparatus, the combination with the frame, the paste-applying means carried by the frame, and the label-carrying means mounted in the frame, of the means for placing and applying the label on the rounded surface of a bottle or the like, said means comprising the bows 17, 17, slides 18, 18, to which said bows are hinged, the guides 19, 19, on the label-magazine in which said slides play, the springs 20, 20, behind said slides, the equalizer 26, pivoted on the frame, and the links 24, 24, coupling the respective bows 17 to the equalizer, substantially as set forth.

6. In a labeling apparatus, the combination with the frame and means carried thereby for applying a label to a rounded surface, of means carried by the frame for applying paste to said rounded surface immediately preceding the applying of the label, said means comprising two spring-arms 5, 5, with inturned ends, the latter provided each with rounded bearing projections 7, brushes 8, 8, having hollow arms, pivotally mounted on the respective arms 5, said brushes being, normally, near together, hose or tubes 11, which supply paste to the respective brushes, and springs 10, at the pivot-points of the brushes, whereby pressure of the apparatus against the rounded surface causes the brushes to move laterally in opposite directions over said surface, substantially as set forth.

7. An apparatus for applying labels to rounded surfaces, comprising as its essentials a frame to carry the parts, a label-magazine mounted slidably in said frame, springs behind said magazine, a spring-follower in said magazine, a pair of paste-applying brushes carried by the frame and adapted to yield laterally in opposite directions when pressed against the rounded surface, a pair of label-retainers carried by the frame and adapted to yield laterally when pressed against the rounded surface, and label-placing means adapted to apply the label to the rounded surface when the apparatus is pressed thereagainst, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CONRAD GEORG SEVERIN.

Witnesses:
H. PETERSON,
E. JOHNSON.