

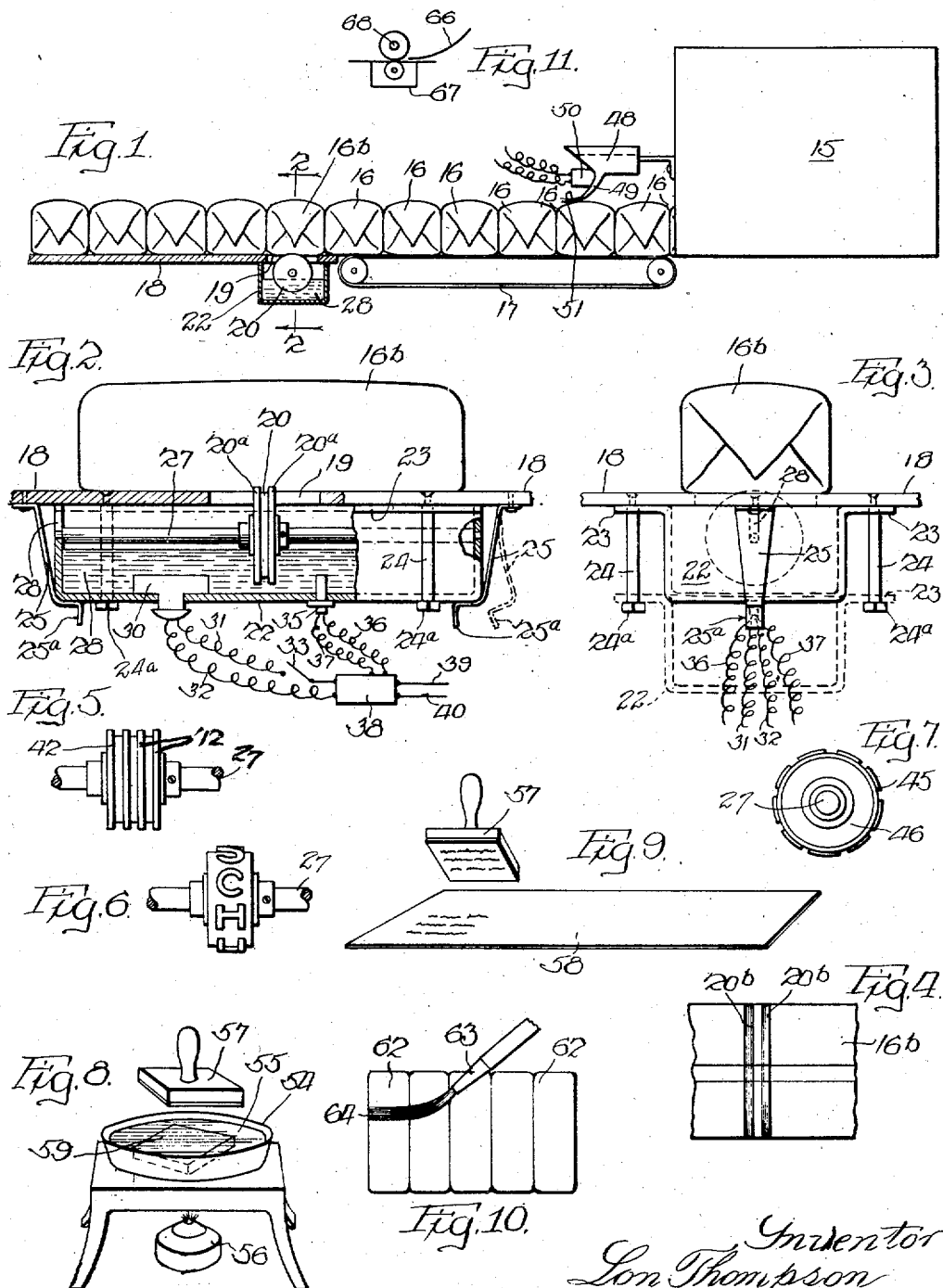
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METHOD AND MEANS FOR MARKING LOAVES OF BREAD OR THE LIKE

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METHOD AND MEANS FOR MARKING
LOAVES OF BREAD OR THE LIKE

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4 Claims. (Cl. 101—36)

The present invention relates to methods and means for marking loaves of bread or the like generally wrapped in what is called wax paper, namely paper coated with paraffin, and being of the kind used for wrapping bread and a large variety of other commodities to preserve them clean and to prevent undue drying out.

The wrapping of the standard loaf at the present time is done automatically by a machine in the larger bakeries, while in the smaller shops it is done by hand, which applies generally also to loaves not suitable for the wrapping machine.

It is sometimes desirable to mark such wrapped bread and other commodities with a special indication, as, for example, the day or date of production. It has been suggested to insert a slip of paper beneath the wrapper to indicate that the loaf was baked on a certain day. Sometimes such a slip showing the trade-mark or the name of the manufacturer has been inserted under the semi-transparent waxed paper. It would be an advantage if the wrapper itself could be marked with any such special indication desired.

When a manufacturer of bread decides on a certain ornamental wrapper, going to considerable thought and expense in the art work thereof and in the selection of a trade-mark, he usually places an order for a large number, often many hundreds of thousands, of such wrappers; and then, when for one reason or another he decides to discontinue that wrapper he often suffers a great loss through the supply of unused and unusable wrappers on hand. This disadvantage is aggravated by the fact that usually he is putting out a number of different brands, under different labels, and the changes are sometimes frequent. It would be an advantage if, with a given standard general form of label he could supply particular trade-marks and other indicia from time to time to such of the stock labels as he is about to use, as by some sort of printing operation.

It may be pointed out in this connection that wax wrapper labels are printed, usually in several colors, by first printing the thin paper and then treating the paper with the paraffin wax, by running the web through a bath of melted paraffin and then between rollers. The result is that the paraffin covers the printing and provides a smooth waxy surface on both sides of the sheet. It is here pointed out also that it is impracticable to print upon such wax paper by ordinary printing methods, as in the printing press, or by means of rubber stamps and the ordinary ink therefor.

The present invention, in one aspect, is directed

to a method for marking such wax paper or the like. Boxes made of waxed cardboard of various thicknesses could be similarly marked and, in general, wherever marking is desired upon a surface so waxed as to render marking by ordinary printing inks unfeasible or unsatisfactory. Another object is to provide a method and means for marking the waxed wrappers and commodities while traveling in a path, for example from a bread-wrapping machine. Another object is to provide simple means for so marking waxed wrappers and such wrapped commodities, at a negligible cost.

The present invention has been developed chiefly in connection with the marking of bread to indicate the day on which it was baked, and prior to this invention no satisfactory method or means for the purpose was known to the industry. My experiments in this field finally led to the discovery of the applicability of melted wax, of a contrasting shade or color (meaning that the shade or color thereof is in contrast with the shade or color of the wax paper to which the marking is applied) in the nature of a printing ink, or as a paint. When such ink or paint, namely the contrasting wax, is melted at a relatively high degree of heat and applied immediately to the wax paper the heat of the melted wax being applied melts the surface wax of the paper, and perfect adhesion and amalgamation takes place between the wax of the paper and the marking wax; and in this connection it is pointed out that by these means a peculiarly attractive result is obtained in that the mark now applied is also of wax, presents the same smooth waxy surface elsewhere present over the surface of the wrapper, will not smear and does not rub off, does not lessen the impervious character of the paper, as the ordinary printing operation would do, but rather increases that imperviousness at the places where the marking occurs. Furthermore, by these means the marking can be done as a continuous operation, with very little attention, at an exceedingly small cost, as the commodity issues from the wrapping machine.

Still other objects and advantages will appear hereinafter.

In the accompanying drawing Figure 1 is a fragmentary side elevational view, partly diagrammatic, showing the application of two means for marking loaves of bread as they issue from a wrapping machine;

Fig. 2 is an enlarged cross-sectional view as on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged end view showing details omitted from the corresponding part of Fig. 1 and by dotted lines showing the container in lowered position;

Fig. 4 is a fragmentary view of the bottom of the loaf of Figs. 2 and 3 showing markings produced thereon;

Fig. 5 is a face elevation of the printing roller similar to the one shown in Fig. 2 but formed to produce four lines instead of two;

Fig. 6 is a face elevational view of a roller similar to that of Fig. 5, but showing letters as the printing characters;

Fig. 7 is a side elevational view of a printing roller such as shown in Fig. 6;

Fig. 8 is a bottom view of loaves of bread showing the application thereto of a hand brush in applying a mark thereto; and

Turning to Figure 1 the rectangular area marked 15 is to be understood as containing the mechanism of a bread-wrapping machine of any appropriate type, the same being well known. Loaves of bread marked 16 wrapped in wax paper issue from that machine upon a belt conveyor 17 and are carried thereby to the horizontal discharge platform 18 provided with an opening 19 therein for the printing roller 20.

Turning to Figs. 2 and 3, showing the preferred form of marking means for loaves of bread, the substantially rectangular open-top pan-like container 22 has outwardly turned flanges 23 at its sides through which loosely pass four substantially long parallel bolts 24 rigidly secured, as by threading, to the horizontal plate-like support 18. At each end (Fig. 2) is a spring 25 secured to a support 18, formed to extend under the bottom of container 22, and with a finger-piece 25a. By flexing the springs 25 outward as shown by dotted lines in Fig. 2, as to one of them, the container is released and slidingly descends on the four fixed posts 24 until the flanges 23 rest on the heads 24a of the bolts respectively. Access is thus had to the interior of the container, as for filling it with melted wax although access may also be had through the opening 19; and in this connection I point out that it is preferable to melt the wax outside the container and use a heating unit for maintaining the wax liquid and desirably at a higher temperature than is necessary merely to melt the wax.

Horizontal shaft 27 is mounted in the end walls of the container, and one end wall has a slot 28 to permit shaft 27 to be lifted upward and then withdrawn from its bearing at the other end, whereby a different printing roller may be applied to the shaft and the same then reinserted.

Circular printing roller 20 has two outstanding printing surfaces 20a, and these surfaces are normally within the body of the liquid wax 28. The loaf of bread 16b in Figs. 1, 2 and 3, resting on support 18 and being pushed in the path of travel by the loaves 16 under the influence of the belt conveyor 17, contacts the printing ridges 20a of roller 20, which printing surfaces extend slightly above the surface of support 18, and the soft bread is indented there as shown in Fig. 2. The weight of the bread maintains such contact with the printing roller that as the loaf travels in its path the printing roller is turned, and hot wax adhering to the printing surfaces is carried into contact with the flat bottom surface of the package, the wax on the wrapper is melted and the wrapper is marked with the two printed wax stripes 20b in Fig. 4 fused with the wax of the wrapper. In my practice one such stripe indi-

cates Monday; two, Tuesday; three, Wednesday, etc.

Referring to Fig. 2 the means for maintaining the wax in the container melted are shown as an electric heating unit 30 having the lead-in wires 31 and 32, in one of which is shown the hand-operated switch 33. This electrical resistance heater 30 is a well known unit applicable generally and requires no detailed description.

In this connection it is pointed out that if the printing roller be made of metal there is a possibility that it will become so hot as not to hold melted wax by adhesion thereto. I do not experience such a problem in connection with printing rollers made of wood, or with wooden rollers having a printing surface formed from a piece of partially vulcanized rubber of the kind used in the ordinary rubber stamp of commerce, namely vulcanized to a soft, yielding, springy degree. In connection with wood and rubber forms the wax may be heated to an unnecessarily high degree while giving the desired results.

It would be desirable in connection with metal printing rollers to regulate the temperature of the liquid wax 28, and accordingly I have shown an aquastat unit 35 projecting into the bath with wires 36 and 37 leading therefrom to a control device 38, to which the heating unit wires are also attached, to maintain the temperature of the liquid wax at approximately no greater than 160 degrees F., the melting point of the wax being about 130 degrees F. The current comes to box 38 through wires 39 and 40. Control box 38 is a unit well known for such control purposes generally. Its effect is to open and close a switch within it (not shown) according to the temperature of the bath whereby that bath may be maintained at a substantially high uniform degree of heat.

The roller of Fig. 5 shows four annular raised printing surfaces instead of the two of Fig. 2, and Fig. 6 shows such a printing roller having raised letters thereon. Fig. 7 shows the roller of Fig. 6 in side view, and it shows also that the printing elements are on a strip of rubber 45 secured to the wooden interior 46.

In Fig. 1 I have shown at 48 a container for melted wax supported above the path of the loaves 16 with a discharge nozzle 49 leading to close proximity with the top surfaces of the wrapped loaves, with an electric heating unit 50 associated with the container and the nozzle, with brush means 51 receiving melted wax from the nozzle and applying it to the wax paper as the loaves pass along.

Fig. 8 shows some loaves of bread marked 62 and the application of a brush 63 marking a line 64 across the bottoms of these loaves. The brush may be dipped in a suitable bath of hot melted wax and coloring matter and then swept across the wax paper wrapping of the loaves.

To provide the wax in a contrasting color or shape, I use the ordinary white paraffin wax of commerce, melt it, and then add a very small quantity, proportionately, of commercial anilin dye, which may be red, green, yellow, blue, etc. With stirring the coloring matter becomes thoroughly diffused throughout the wax.

I contemplate as being included in these improvements all such variations, changes and departures from what is thus specifically illustrated and described as fall within the scope of the appended claims.

I claim:

1. In a device for marking wax paper, an

- open-top container for melted wax, a substantially horizontal support, means for holding said container upon said support for vertical movement therebelow including a plurality of parallel bolts depending from the support passing through the container, means for maintaining wax in said container melted, a printing roller removably mounted to rotate in said container and in a normal amount of melted wax therein, said roller being mounted to project through said support whereby wax paper on the support may be marked by the printing roller, and means for securing the container in selective vertical positions on said bolts.
2. In a device for marking wax paper wrapped loaves of bread or the like adapted for use with a wrapping machine having a horizontal discharge platform and having means for moving said loaves upon said platform by horizontal pressure of one loaf upon another, the combination of a slot in the platform, an open-top container for a bath of melted wax or the like supported by and beneath said platform in vertical register with the slot, means for maintaining said bath at a substantially uniform predetermined temperature higher than the melting point of the wax, bearings in said container disposed transversely of the direction of travel of the loaves, a shaft removably mounted in said bearings, said shaft carrying a printing roller freely rotatable in said wax and having a printing surface substantially continuous around its periphery, the roller projecting through the slot slightly above the upper surface of the platform to contact with and be rotated by the loaves by weight and movement of the loaves thereon and adapted to apply to each loaf in its movement a stripe of hot melted wax extending across the bottom face of its wrapper whereby said stripe becomes fused with the wax of the wrapper.
3. In a marking device for loaves of bread or the like, the combination with a platform provided with an opening therein, of means for moving the loaves upon said platform solely by horizontal pressure of one loaf upon another, an open-top container supported by and beneath said platform vertically below the opening, means for maintaining a liquid printing material in said container, and a printing roller mounted to rotate freely in said container and in normal contact with said printing material, said roller having substantially throughout its periphery a plurality of printing surfaces spaced apart transversely of the direction of travel of the loaves and being mounted to project through the opening slightly above the plane of the upper surface of the platform to be rotated solely by the weight thereon and movement thereover of the loaves successively passing over said opening, whereby a plurality of parallel stripes of liquid printing material is received by each loaf upon its bottom face.
4. The method of marking loaves of bread wrapped in wax paper which comprises the step of providing a bath of melted wax; adding a coloring material to said bath; controlling the temperature of said bath to maintain a substantially uniform temperature for the bath higher than the melting point of the wax and high enough to melt the wax of the paper when the melted wax and coloring material from the bath are brought into contact therewith; applying merely by contact substantially without extraneous pressure a stripe of the commingled hot melted wax and coloring material from the bath directly to the wax paper wrapped loaves, and fusing the wax and coloring material so applied with the wax of the paper in the region of said mark.

LON THOMPSON.

CERTIFICATE OF CORRECTION.

Patent No. 1,977,460.

October 16, 1934.

LON THOMPSON.

It is hereby certified that error appears in the above numbered patent requiring correction as follows: In the drawing, strike out Figs. 8, 9 and 11; and for "Fig. 10" read Fig. 8; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 22nd day of January, A. D. 1934.

(Seal)

Leslie Frazer
Acting Commissioner of Patents.

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2. In a device for marking wax paper wrapped loaves of bread or the like adapted for use with a wrapping machine having a horizontal discharge platform and having means for moving said loaves upon said platform by horizontal pressure of one loaf upon another, the combination of a slot in the platform, an open-top container for a bath of melted wax or the like supported by and beneath said platform in vertical register with the slot, means for maintaining said bath at a substantially uniform predetermined temperature higher than the melting point of the wax, bearings in said container disposed transversely of the direction of travel of the loaves, a shaft removably mounted in said bearings, said shaft carrying a printing roller freely rotatable in said wax and having a printing surface substantially continuous around its periphery, the roller projecting through the slot slightly above the upper surface of the platform to contact with and be rotated by the loaves by weight and movement of the loaves thereon and adapted to apply to each loaf in its movement a stripe of hot melted wax extending across the bottom face of its wrapper whereby said stripe becomes fused with the wax of the wrapper.
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