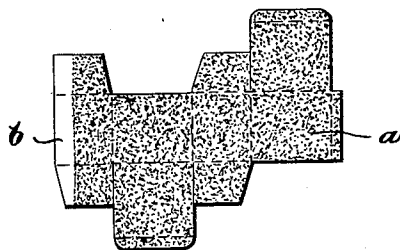
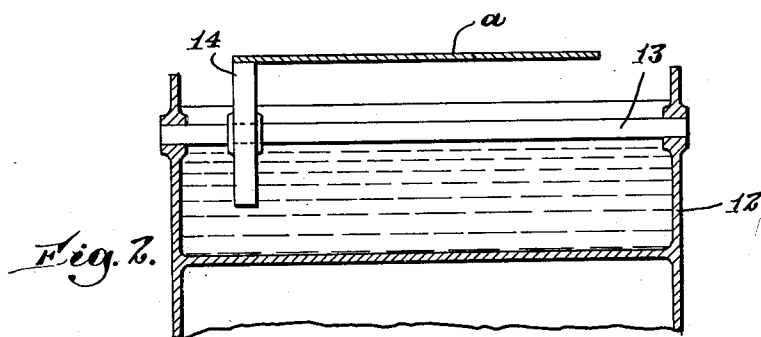
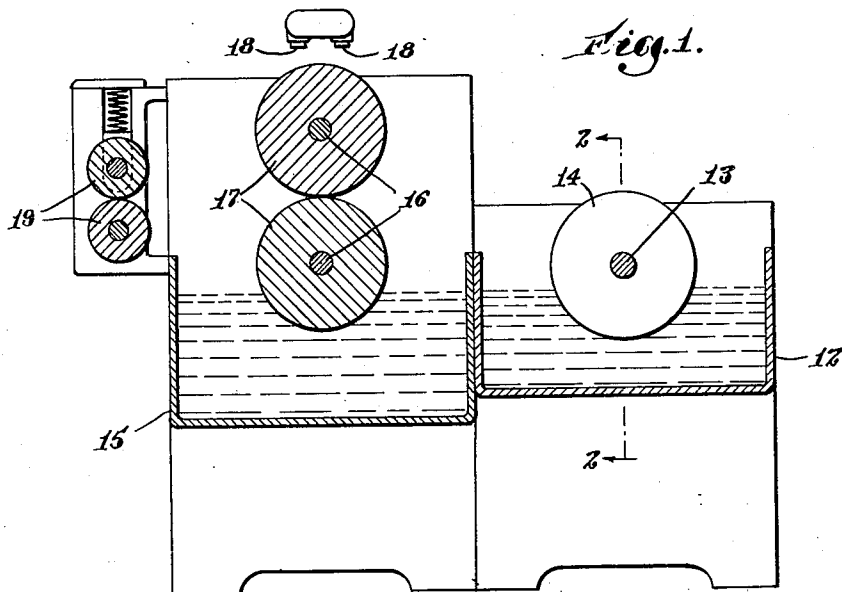


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METHOD OF WAXING BLANKS

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METHOD OF WAXING BLANKS

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This invention relates to the production of moisture-proof paper box or carton blanks, and has particular reference to the production of such blanks having high-glossed surfaces.

Lithographed cartons having glossy surfaces are very desirable, and are largely used in ice-cream and butter and other trades. Since it is necessary to coat the blanks quite heavily with wax in order to obtain the desired glossy surface appearance, and since such blanks could not be folded with overlapping portions glued together because the presence of such a heavy coating of wax interfered with the required action or function of the glue, various means have been employed to remove the surplus wax from the glue laps of the blanks, necessitating quite expensive operations that do not always have the best results.

Another objection which, so far as I am aware, has not been cured, is that when a heavy coating of wax is applied to the kind of paper generally used for box blanks, so much of the wax penetrates the paper as to result in discoloration of the surface which is to be the visible surface of the completed box or carton. Such unsightly outer surface appearance is not lessened by the practiced methods of removing some of the surplus wax, because such removal does not affect the wax which has already penetrated the paper.

One of the objects of my present invention is to produce high-glossed blanks having portions in condition to be glued together, without having to employ any wax-removing mechanism or devices, and I attain this object by first, before applying melted wax to the blanks, applying water or other oil-repelling material to those portions of the blanks which are to be glued together.

Another object is to produce high-glossed blanks the surfaces of which are not unsightly due to complete penetration of melted wax into the box board material of the blanks, and this object is attained by applying water or other oil-repelling to the entire area of one surface of each blank before applying any melted wax thereto.

With the above stated objects in view, my

invention consists in the method and the machine substantially as hereinafter described and claimed.

Of the accompanying drawing:—

Figure 1 is a sectional elevation of so much of the machine which can be employed to carry out my improved method as is necessary to an understanding of the same.

Figure 2 represents a section on line 2—2 of Figure 1.

Figure 3 is a plan view of one form of blank produced in accordance with my invention.

Similar reference characters indicate similar parts or features in all of the views.

Supported by a suitable frame is a tank 12, and a suitably driven shaft 13 carries a disk 14 the lower portion of which travels in liquid in the tank, said liquid being preferably water but not necessarily so. Adjacent to the tank 12 is a second tank 15 which, in practice, has means for keeping paraffine wax in the tank in melted condition. Such means, being well-known in mechanisms for applying wax to blanks or sheet material, are not necessary to illustrate herein.

Suitably driven shafts 16 carry rolls 17 the lower one of which travels in the melted wax in the tank 15, and from nozzles 18 melted wax is deposited on the upper roll 17.

Guided and caused to travel by means such as well known in blank-waxing machines, blanks such as illustrated at *a* contact first with the water disk or roll 14, and the water so applied to the successively travelling blanks remains thereon so that as they pass between the waxing rolls 17 little or no wax will adhere to those portions or areas of the blanks that have been coated with water. This is due to the well known fact that water and oil will not mix, and consequently paraffine wax carried by the rolls 17 can not penetrate the wet areas of the blanks and most if not all of the wax which may form a film over the wet areas will be squeezed off by the rolls 19 between which the blanks then pass from the waxing rolls 17. I do not limit myself to the use of water in the tank 12, as any other well-known oil-repelling material may be substituted therefor.

If it is not desired that the treated blanks shall present high-gloss surfaces, they may pass from the rolls 19 to any suitable carrier to permit the moisture to dry, but if a high gloss is wanted, the blanks will be delivered to a chilling bath as is customary in the production of high-glossed sheet material.

When the rotary moistener is narrow and the blanks contact therewith as illustrated in Figure 2, the result is that a narrow margin of each blank has little or no wax thereon, as indicated at *b* in Figure 3. This margin is the portion which is to have glue applied thereto when the blank is converted to box form. The other or opposite surface of the blank however will be practically uniformly coated with wax.

If it be desired that the said opposite surface shall have little or no wax along the margin opposite the flap portion *b*, a suitable moistening disk in a higher position than the disk 14 can be mounted so as to apply water to the upper surface of the margin at the right in Figure 2.

The moistening disk 14 may be of any width desired. If made in the form of a roll of such length that the entire undersurface of each blank passing over it will be moistened, then that surface of the completely treated blank will have so little wax on it that there will be no such penetration of the wax into the paper material as to cause the completed box or carton to present a discolored or unsightly surface.

Having now described my invention, I claim:

1. The method of producing box blanks having a limited amount of wax thereon, said method consisting in first applying oil-repelling material to marginal surface portions of the blanks, then applying melted wax to the same surface portions of the blanks, and then subjecting the blanks to a squeezing operation.

2. The method of producing box blanks having a limited amount of wax thereon, said method consisting in treating predetermined areas of the blanks with an oil repelling material, then applying melted wax to the same areas of the blanks and then subjecting the blanks to a squeezing operation.

3. The method of waxing blanks with portions thereof in condition to be adhesively secured, said method consisting in first applying oil-repelling material to those portions of the blanks which are to be adhesively connected, then applying melted wax to the same areas of the blanks, and then subjecting the blanks to a squeezing operation.

In testimony whereof I have affixed my signature.

MELVIN H. SIDEBOTHAM.