May 29, 1923. 1,457,217

G. A. DOSTAL

APPARATUS FOR APPLYING PARAFFIN TO SOAP CAKES

Filed March 14, 1921

Fig. 1.

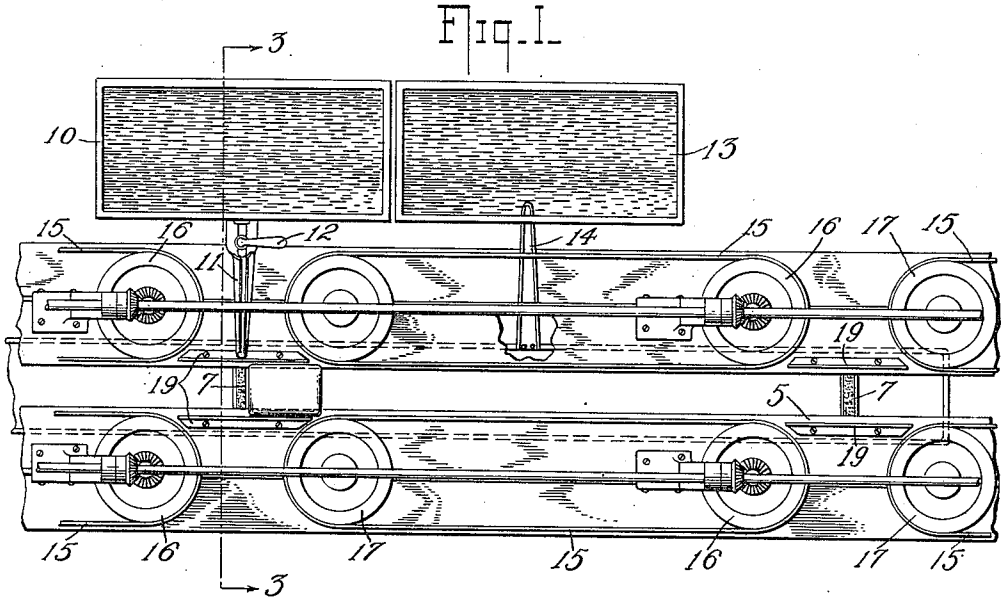


Fig. 2.

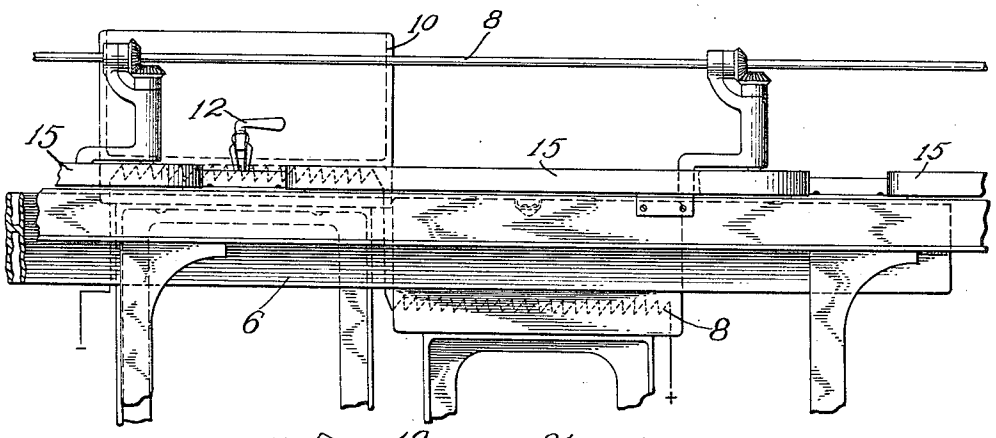
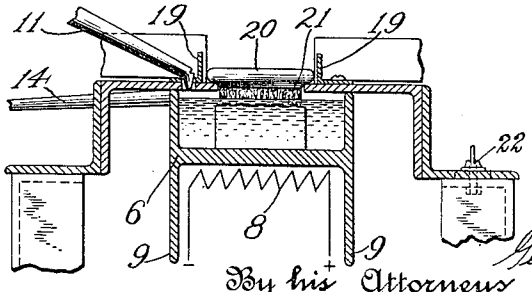


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE A. DOSTAL, OF NEW YORK, N. Y., ASSIGNOR TO PICTORIAL SOAP MANUFACTURING CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

APPARATUS FOR APPLYING PARAFFIN TO SOAP CAKES.

Application filed March 14, 1921. Serial No. 452,149.

To all whom it may concern:

Be it known that I, GEORGE A. DOSTAL, a citizen of the United States, and resident of the borough of Manhattan, city and State of New York, have invented certain new and useful Improvements in Apparatus for Applying Paraffin to Soap Cakes, of which the following is a specification.

The present invention relates to apparatus for affixing labels, and more especially to apparatus for applying paraffin to soap cakes to protect one face thereof against wearing away in use and to serve as an adhesive to secure a label to the soap cake in such manner that the label will be retained upon the soap cake until the soap has been entirely used.

The invention has for an object to provide improved apparatus for applying the paraffin to the soap cakes.

The apparatus may be used in connection with any label-applying means which is arranged to apply labels to the coated surface of the soap cake preferably while the paraffin is still in a soft and tacky condition. After the labels are applied they are preferably smoothed out for instance by apparatus such as described in my application for Letters Patent of the United States for label affixing apparatus filed of even date herewith Serial No. 452,148. The nature and object of the invention will be better understood from a description of an illustrative embodiment thereof.

In the accompanying drawing forming a part hereof

Figure 1 is a plan view of an apparatus constructed in accordance with the invention;

Fig. 2 is a side elevation of the same;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

The apparatus illustrated comprises parallel ways 5, 5 a conveyor mechanism for moving soap cakes successively along said ways, a paraffin tank 6 with means for heating the paraffin to maintain it in melted condition and one or more wicks 7 adapted to feed paraffin from the tank to the soap cakes.

The parallel spaced ways 5, 5 are arranged to engage and support the soap cake only adjacent to the side edges thereof as shown in Fig. 3. The tank 6 is open at the top and extends immediately beneath and longitudinal of the ways. The level of the paraffin therein is maintained preferably relatively close to the soap cakes in order that the portion of the wick extending from the level of the liquid to the point of application to the soap cake may be as short as possible, and also in order that the coating of paraffin may be subjected to the heat radiating from the tank of paraffin. A plurality of wicks 7 at spaced points are arranged in the tank to wipe against and deliver paraffin to the under-face of the soap cakes as they pass along the ways and over the tank 6. As a soap cake passes over the wicks successive coatings of paraffin are wiped on to its lower face until the desired thickness is applied. Any desired number of wicks may be employed, two being shown in the structure illustrated.

Suitable means is provided for heating the tank as for example an electric coil 8 positioned beneath the bottom of the tank and between downwardly extending flanges 9 formed on the tank. Preferably means is provided for maintaining a circulation of paraffin in the tank. As shown, a supply tank 10 is provided, having a connection 11 with the main tank 6 which connection is controlled by a valve 12. A second tank 13, positioned at a lower level, is connected by means of an overflow pipe 14 to the main tank so as to permit the paraffin in the tank 6 to be maintained at the desired level.

The conveying means for pushing forward the soap cakes comprises belts 15 arranged frictionally to engage the side edges only of the soap cakes and to move the same forward. These belts are mounted on pulleys 16, 17 arranged in pairs, a pulley of each pair being positively driven as from shafts 18, 18 extending longitudinally above and parallel to the ways 5.

It has been found in practice that conveyor belts have a tendency to displace some of the soap cakes from true horizontal position by lifting one edge thereof, and that if these belts were to continue in engagement with the soap cakes as the latter pass over the wick, the variations in position of the cakes would cause an uneven coating of paraffin upon their faces. In order to avoid such uneven coating I arrange the belts so that one pair of belts moves the soap cakes to a point near to, but not in engagement with, each wick and another pair of belts

engage the soap cakes immediately after they have passed beyond and out of engagement with the wick, each cake being pushed over the wicks by the cake immediately behind. By this arrangement each soap cake engages the wicks without interference by the belts, and therefore each soap cake of a given size engages the wicks with the same pressure and receives the same coating of paraffin. Guides 19, 19 are preferably provided to guide the soap cakes laterally during the time they are not engaged by the belts 15.

The apparatus shown is capable of operation with soap cakes of various shapes but is more particularly designed for use with soap cakes having a raised central portion with thinner edge portions. Such a cake is shown at 20 in end view in Fig. 3 the raised central portion being shown at 21. The label is applied to the central raised portion and to that portion the paraffin is applied. The ways are arranged to engage only the thinner edge portions of the cake and therefore do not become coated with paraffin. The ways 5, 5 are made adjustable toward and from each other by means of a bolt and slot connection with the support as indicated at 22 in Fig. 3.

In operation the soap cakes as introduced into the machine are relatively cold. As the cake passes the first wick a thin film of paraffin is wiped onto the cake and is cooled thereby and therefore hardened. The outer surface of the film is however subjected to the heat radiating from the hot paraffin in the tank 6, and therefore does not completely harden. As the soap cake passes the next wick another coating is applied and, because the surface of the preceding coating is in relatively soft condition, a firm adherence is obtained.

Paraffin having a high melting point is preferably used in coating the soap in order that it may not be affected in use by hot water.

It is to be understood that variations in the particular structure illustrated may be made without departing from the spirit of the invention, the scope of which is indicated in the appended claims.

I claim:

1. An apparatus of the character described comprising in combination parallel spaced ways arranged to support soap cakes adjacent their side edges only, a paraffin tank beneath said ways, heating means therefor, said tank being arranged to radiate heat against the soap cakes on the ways, a wick arranged to conduct paraffin from the tank and apply it to the under face of soap cakes moved along said ways, and conveyor means for moving soap cakes along said ways and over said wick.

2. An apparatus of the character described comprising in combination parallel spaced ways arranged to support soap cakes adjacent their side edges only, a paraffin tank beneath said ways, heating means therefor, a wick in said tank arranged to engage the under faces of soap cakes passing along said ways to apply paraffin thereto, and conveyor means for moving soap cakes along said ways and over said wick, said means consisting of pairs of belts arranged to frictionally engage the side edges only of the soap cakes to move the same along said ways said belts being so arranged that during the time a soap cake is passing over the wick it is entirely disengaged from the belts and is moved forward only by the pressure of the following soap cake, substantially as and for the purpose described.

3. In apparatus of the character described the combination with parallel spaced ways arranged to support soap cakes adjacent their side edges only, a paraffin tank beneath said ways, heating means therefor and a plurality of wicks in said tank at spaced points along said ways arranged to engage the under faces of soap cakes passing along said ways successively to apply paraffin thereto, of conveyor means for moving soap cakes along said ways and over said wicks comprising pairs of belts arranged to frictionally engage the side edges only of the soap cakes to move the same along said ways said belts being so arranged that during the time of soap cakes passing over the wicks it is entirely disengaged from the belt and is moved forward only by the pressure of the succeeding soap cakes but is again engaged and moved forward by said belts as soon as it passes free of said wicks, substantially as and for the purpose described.

4. In apparatus of the character described the combination with parallel spaced ways arranged to support soap cakes adjacent their side edges only, a paraffin tank beneath said ways, heating means therefor and a plurality of wicks in said tank at spaced points along said ways arranged to engage the under faces of soap cakes passing along said ways successively to apply paraffin thereto, of conveyor means for moving soap cakes along said ways and over said wicks comprising pairs of belts arranged to frictionally engage the side edges only of the soap cakes to move the same along said ways said belts being so arranged that during the time of soap cakes passing over the wicks it is entirely disengaged from the belt and is moved forward only by the pressure of the succeeding soap cake but is again engaged and moved forward by said belts as soon as it passes free of said wicks, of belts arranged to frictionally engage the side edges only of the soap cakes to move the same along said ways so that

the soap cakes wipe over said wicks successively, said tank being open at the top to cause the soap cakes to be subjected to heat radiating from the paraffin in said tank between wicks substantially as and for the purpose described.

5. The method of applying paraffin to soap cakes which comprises applying successively a plurality of coats of paraffin to one face of a soap cake and applying heat to said soap cakes between the applications of paraffin substantially as and for the purpose described.

6. In apparatus of the character described the combination with spaced parallel ways arranged to support soap cakes having a raised central face portion by engaging said soap cakes adjacent their side edges, of an open paraffin tank positioned beneath said ways and a wick in said tank, the top of the wick being on a lower level than the ways and arranged to apply paraffin to the raised central portion of said soap cakes substantially as and for the purpose described.

In witness whereof I have hereunto set my hand.

GEORGE A. DOSTAL.