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MACHINE FOR COATING CAKES, &c.

APPLICATION FILED OCT. 28, 1915.

1,210,002. Patented Dec. 26, 1916.

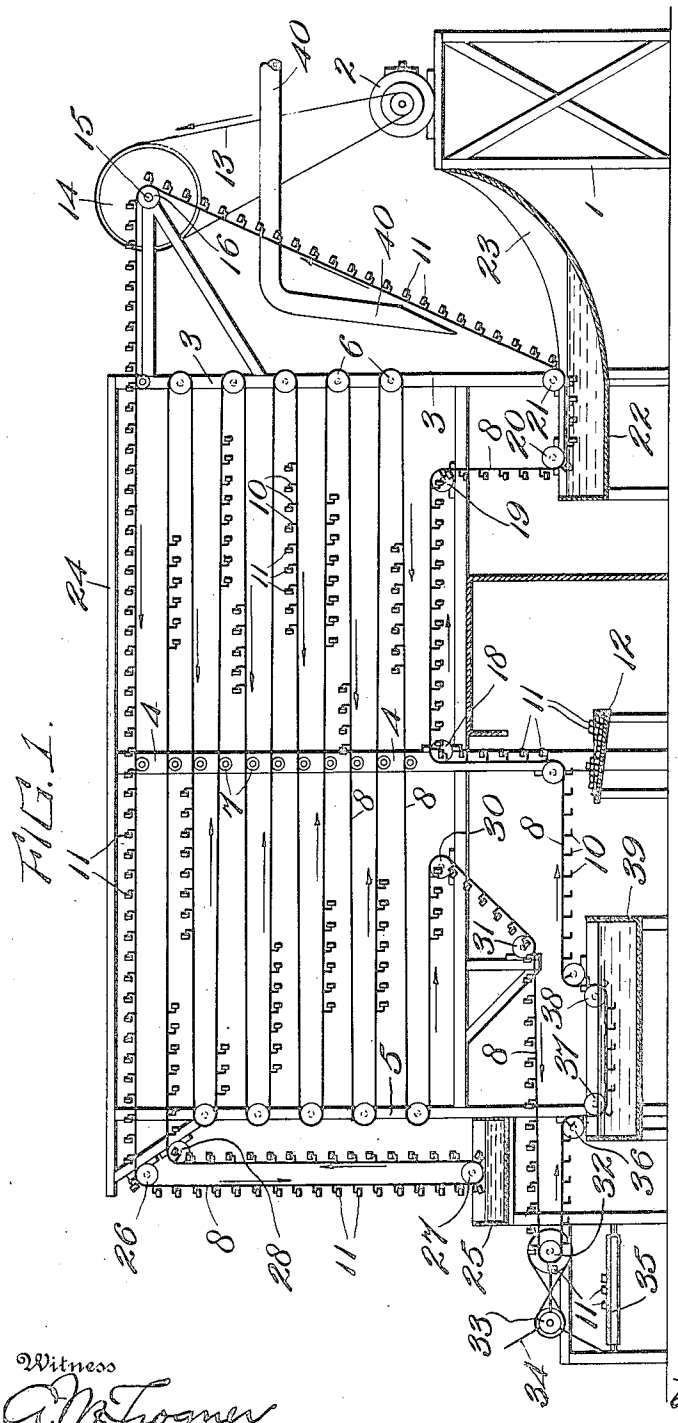

FIG. 1.

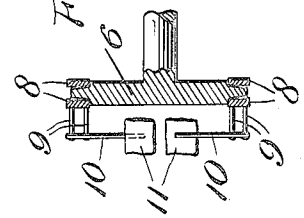

FIG. 3.

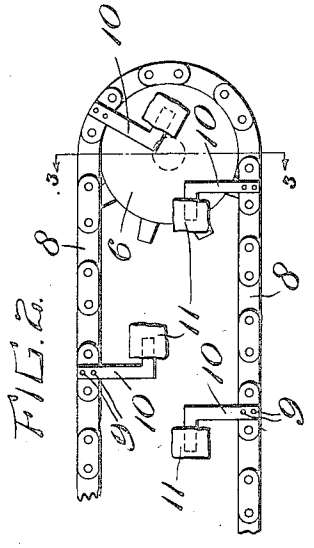

FIG. 2.

Witness

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UNITED STATES PATENT OFFICE.

LYMAN C. REED AND OWEN P. SMITH, OF NEW ORLEANS, LOUISIANA.

MACHINE FOR COATING CAKES, &c.

1,210,002. Specification of Letters Patent. Patented Dec. 26, 1916.

Application filed October 28, 1915. Serial No. 58,474.

To all whom it may concern:

Be it known that we, LYMAN C. REED and OWEN P. SMITH, citizens of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Machines for Coating Cakes, &c.; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an apparatus for coating cakes or other articles with marshmallow, icing or other material, and has for its object to provide an apparatus which will be simple in construction and more efficient in action than those heretofore proposed.

With these and other objects in view the invention consists in the novel details of construction and combination of parts, more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification in which like numerals designate like parts in all the views—Figure 1 is a diagrammatic side elevational view of a machine made in accordance with this invention; Fig. 2 is an enlarged detail view of a portion of the conveyer, showing the cakes or other articles thereon; and Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

1 indicates any suitable frame or support on which the motor 2 is mounted, and 3, 4 and 5 suitable standards or other supports for the sprocket wheels 6, and guide pulleys 7 over which passes the conveyer chain 8. The conveyer chain 8 is provided in any suitable manner, as by the pins 9, with the offset cake holders 10, preferably of the L shape shown, and adapted to receive the individual cakes 11 to be iced, or coated.

12 represents a stand or receiver for holding the cakes 11, near which the operator may stand and place by hand, the cakes 11 on the holders 10 as they pass the stand 12. The conveyer 8, is suitably driven from the motor 2 by means of the belt 13, passing over the pulley 14, mounted on the shaft 15 carrying the driving sprocket 16 over which said conveyer passes as will be clear from the drawings.

The cakes 11 after leaving the stand 12, pass with the belt 8 over the guides 18 and 19 and under the guides 20 and 21 into the tank or vessel 22, containing the marshmallow or coating to be applied to the cakes 11. It will be observed that the arrangement is such that the cakes or other articles 11 to be coated pass into and out of said tank below the belt or conveyer 8, so that they are more effectually coated and so that as they ascend to the driving sprocket 16, the drip will fall free of said belt. An extension 23 of said tank is provided which extends under the path of travel of the cakes 11 to receive said drip. After leaving the power sprocket 16 the cakes and belt pass under the top 24 of the frame work, which latter may be open or closed. If open, the subsequent travel of the belt is made sufficiently long to dry the cakes before the stand 12 is again reached, while if said frame work, is closed, artificial means for drying (not shown) may be employed.

Either inside or outside the standards 3, 4 and 5, but preferably outside thereof, I provide the cold icing tank 25 and pass the belt 8 over the guide 26 and under the guide 27 located in said tank so that the cakes or other articles 11 will be coated with the hardening liquid contained in said tank. After leaving the tank 25 the cakes and belt pass over the guide 28 and back into the framework, where it passes back and forth as illustrated. If the framework be open, the number of passages backward and forward of the belt will be made sufficient to properly dry the cakes without any artificial drying means. On the other hand, if the framework be closed a drying means will be employed and in such case the number of passages backward and forward or the number of folds of the belt may be decreased.

After the cakes have been properly dried the belt 8 containing the said cakes passes over the guide 30 and out of the framework, when it may pass over another guide 31 and from said guide 31 to the guide 32 where the cakes are subjected to the action of a stripping device 33 consisting of a wheel or pulley provided with the stripping arms 34 adapted to rotate into the path of the cakes 11, and to strip them from the holders 10 and deposit them upon the conveyer 35 which will carry them to any convenient point for packing in boxes or for otherwise disposing of the same. The said wheel or pulley associated with the stripping device 33 is conveniently operated by the crossed belt, not lettered, passing over a similar but

larger pulley, not lettered, and driven from the guide 32, all as will be readily understood from Fig. 1 of the drawings. The cakes being thus stripped from the belt 8, the said belt passes over the guide 36 and under the guides 37 and 38 into the tank 39 containing hot water or other cleansing fluid, whereupon the clean belt and cake holders 10 return to the stand 12 ready for the reception of fresh cakes, all as will be clear from Fig. 1 of the drawings. The operation of the invention will be clear from the foregoing, but may be briefly summarized as follows: Cakes or other articles 11 are first brought to the stand 12, where an operator places them by hand or otherwise onto the cake holders 10 whereupon the belt 8 driven by the motor 2 carries the said cakes and belt over and under the guides 18, 19, 20 and 21 into the tank 22 containing the material with which it is desired to coat the cakes. After the cakes or other articles have been thus coated they are carried on the underside of the belt along an inclined path above said tank 22, and an extension 23 of said tank receives the drip from the said cakes. While the cakes are on said inclined path it is found convenient to subject them to a hot air blast which not only sets the coatings on the cakes, but also aids to remove the surplus material. Such a blast may be introduced through the pipe 40. The cakes are then carried through a framework where they may be subjected to an artificial drying operation or they may be left to dry themselves. They are also carried by the belt 8 into and out of a cold icing tank 25 where they receive icing or other hardening material, and after becoming dried in the framework they pass out of the same and are subjected to a stripping machine 33 which strips the said cakes from their holders 10 and delivers them to a conveyer 35, which latter carries the cakes to a convenient point for packing. After the cakes have been stripped from the conveyer 8 the latter passes into a hot water tank where the icing or other coating material is dissolved from the belt or conveyer and renders the latter ready for the reception of additional cakes from the stand 12.

It will thus be seen that the operation of coating cakes or other articles by this machine obviates the wasteful and costly operations heretofore practised in that it not only prevents the waste of material, but that it saves labor and is far more cleanly and sanitary than the hand operations now in use.

It is obvious that those skilled in the art may vary the details of construction, as well as the arrangement of parts, without departing from the spirit of the invention, and therefore it is not desired to be limited to the above disclosure except as may be required by the claims.

What is claimed is:

1. In a machine for coating cakes and other edibles the combination of an endless belt comprising a single chain; means for driving said belt over a predetermined path, one portion of which is inclined; a plurality of pins arranged in pairs projecting laterally from said belt; an L-shaped cake holder secured to one end of each pair of pins; a vessel having an extension located under the inclined portion of said path, for holding a coating fluid through which said holders pass; means for delivering a blast of air to the cakes while traversing the inclined portion of said path; a second vessel for containing cold icing material through which said holders pass; a rotating drum provided with radial stripper arms traveling at a speed greater than that at which said belt and holders travel, and adapted to strip the cakes from said holders; and a third vessel for containing hot water for cleansing said holders, substantially as described.

2. In a machine for coating cakes and other edibles the combination of an endless moving conveyer provided with offset depending cake holders; means for supplying a coating material to said cakes as they are moved by said conveyer; a guide around which said conveyer and coated cakes are moved; a pulley driven by said guide; a belt passing over said pulley; a second pulley of a smaller diameter than said first named pulley, over which said belt passes; and a stripping device comprising arms driven faster than said conveyer adapted to strike said coated cakes as they move around said guide and to strip them from said conveyer, substantially as described.

In testimony whereof we affix our signatures.

LYMAN C. REED.
OWEN P. SMITH.