

T. & D. KIHLGREN.
CONFECTIONERY MACHINERY.
APPLICATION FILED MAR. 26, 1909.

1,011,444.

Patented Dec. 12, 1911.

Fig. 1.

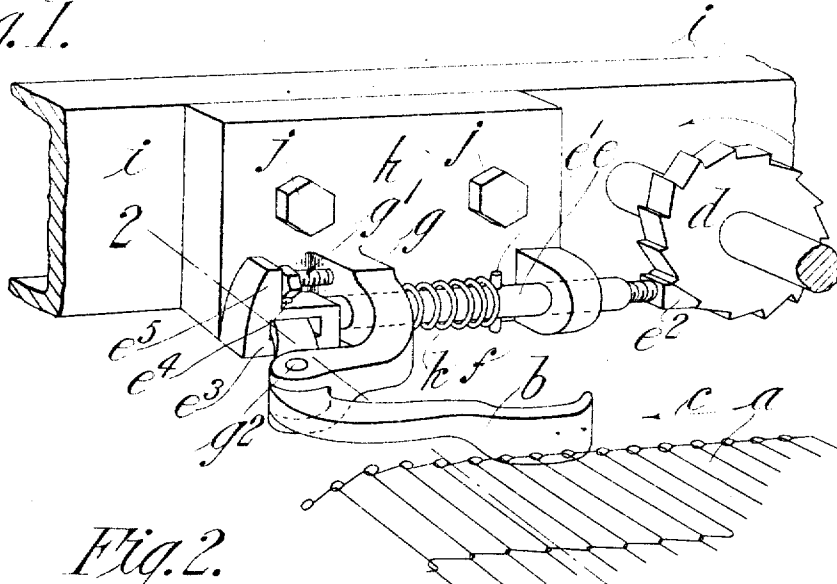


Fig. 2.

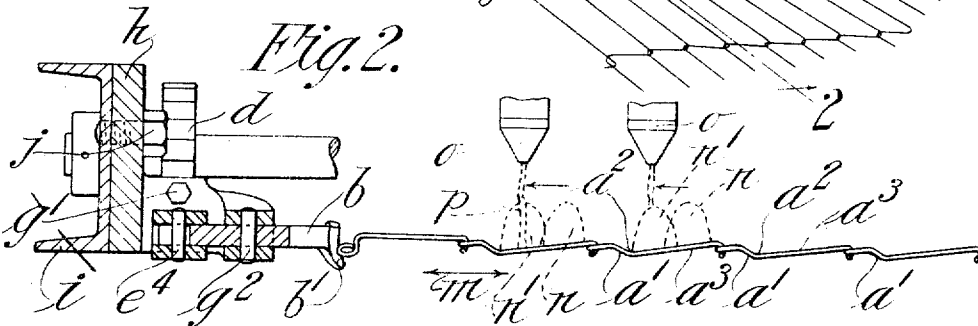
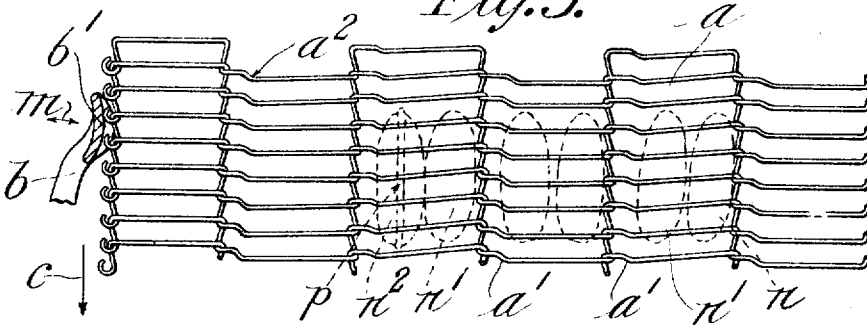


Fig. 3.



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THEODOR KIHLGREN AND DAVID KIHLGREN, OF SPRINGFIELD, MASSACHUSETTS,
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CONFECTIONERY MACHINERY.

1,011,444.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, THEODOR KIHLGREN and DAVID KIHLGREN, citizens of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Confectionery Machinery, of which the following is a specification.

Our invention relates to improvements in machines for the manufacture of confectionery in which the chocolates or other confections are carried, during the coating process, on a horizontally moving apron. After this coating process has been completed it is the common practice to decorate or apply to the confection a string or ridge-shaped layer of chocolate, which operation has usually been performed by hand.

Our present invention particularly relates to an apron construction and means for vibrating the same for the purpose of causing the confections to automatically assume a position in alinement each with the other in succession, whereby the confections will all receive the decoration of chocolate or other material as the apron passes beneath a receptacle from which a stream of chocolate or other material is flowing.

The apron or belt which is shown and described in this application is not claimed herein but is in applicants' co-pending application filed April 18, 1910, under Serial No. 556,130 allowed May 8, 1911.

This invention is designed to be employed in connection with the construction shown, described, and claimed in an application for Letters Patent of the United States filed by Theodor Kihlgren on September 23, 1908 under Serial No. 454,422 for improvements in "Stringing device for making confections."

In the drawings forming part of this application,—Figure 1 is a perspective view of the apron-vibrating mechanism showing a portion of the chocolate-receiving apron. Fig. 2 is a side elevation of the same and with the shaker-lever, in section on the line 2—2 of Fig. 1. Fig. 3 is a plan view of the apron in detail.

Referring to the drawings in detail, wherein the same reference characters indicate the same construction, *a* designates the apron proper; *b* designates a shaker-lever having a curved or bent end *b*¹ engaging, intermit-

tently, the side or edge of the apron as the same is moved in the direction of the arrow *c* by any suitable mechanism, not shown. The lever *b* is operated by means of a suitably driven ratchet-wheel *d* acting upon a rod *e* slidably supported in the lugs *f* and *g* which are a part of the piece *h* which is bolted to a frame-member *i*, as shown at *j*. The rod *e* is normally pressed toward the wheel *d* by means of the coiled spring *k* acting on the pin *e*¹ and the lug *g*. The end of the rod *e* is provided with a wedge-shaped end *e*² and with which the teeth of the wheel *d* engage. *e*³ indicates a right-angular shaped piece which is attached to the outer end of the rod *e* and to which the shaker-lever *b* is pivoted, as shown at *e*⁴. The part *e*⁵ is for the purpose of engaging the adjustable stop *g*¹ for limiting the throw of the shaker-lever *b*. This lever is pivoted to the lug *g* at *g*². It is therefore obvious that when the wheel *d* is rotated, its teeth, acting on the rod *e*, will reciprocate the same against the tension of the spring *k*, and will, in turn, impart a shaking or vibratory motion to the traveling confectionery receiving apron *a*, as shown by the arrow *m* in Fig. 3.

Referring now to the construction of the apron *a*: it will be noticed that the individual bars or wires thereof are formed with a bent or inclined portion *a*¹ whereby the upper surface of the apron is provided with a channel portion *a*². By reason of the inclined portion *a*¹, in the wires of the apron there is formed a channel *a*² with the longer inclined portion *a*³ down which inclined portion the confections, shown in dotted lines, will slide into contact with the inclined or bent portion *a*¹. This sliding or alining action of the confections is brought about by means of the action of the shaker-lever *b* striking an intermittent blow on the edge of the apron *a* during its longitudinal movement, as readily understood.

n designates the first position of the confection when placed on the apron, and *n*² its second position after the sliding action downward on the part *a*³ and against the bent portion *a*¹ of the wires.

o designates a suitable receptacle for containing the liquid chocolate for applying the decorated string or layer of the material as the confections are moved under this recep-

tacle. This layer or string of the chocolate as applied, is shown at *p*, and as all of the confections will be automatically moved into line with the stream of flowing chocolate, each confection will, in turn, be decorated as it passes under the receptacle *o*. Each element of the apron, it will be noticed, is substantially zigzag in shape in plan view, with the channel portion *a*² located between the bends of the wire.

What we claim, is:--

1. A confection alining mechanism having in combination, a horizontally movable apron for receiving the confections, a portion of the apron being provided with a channel-shaped surface, a ratchet element, and means including an L-shaped member and a reciprocable rod interposed between the ratchet element and the edge of the apron for imparting a lateral vibratory motion to the apron, whereby when confections are placed on the apron they will be automatically moved into the channel position of the apron.

2. A confection alining mechanism having in combination with an apron element, a lever arranged in the plane of the apron for vibrating said element in a transverse direc-

tion, a ratchet wheel, a rod interposed between the wheel and lever for imparting intermittent motion to the lever, substantially as described.

3. A vibrator mechanism for the conveyor element of confectionery machinery, comprising in combination, a lever for engaging the side of said element, a ratchet-wheel, a rod adapted to be struck by the teeth of said wheel and pivotally connected to the lever, whereby an intermittent action will be imparted to the lever and apron, substantially as described.

4. In a machine of the kind described, the combination with a lever pivoted between its ends, an apron element, an intermittently actuated rod connected to one end of the lever, the opposite end of the lever being arranged to strike the edge of said apron, whereby an object on said apron will be moved in a transverse direction, substantially as described.

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