W. F. GOWARD.

APPARATUS FOR THE MANUFACTURE OF CONFECTIONERY.

No. 111,638. Patented Feb. 7, 1871.

Fig. 1

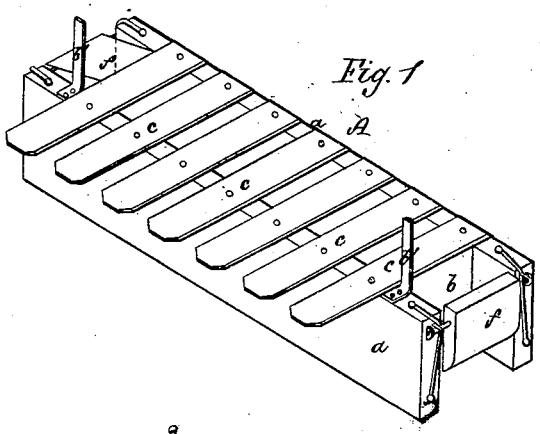


Fig. 3.

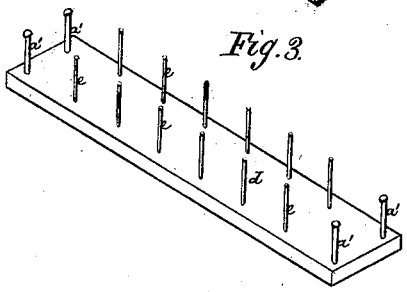
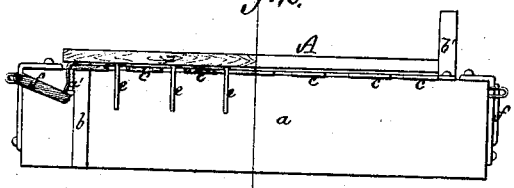


Fig. 2.



Witnesses.

William E. Alden.

Edward Griffiths.

William F. Goward.

By his Attorney

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WILLIAM F. GOWARD, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 111,638, dated February 7, 1871.

IMPROVEMENT IN APPARATUS FOR THE MANUFACTURE OF CONFECTIONERY.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom these presents shall come:

Be it known that I, WILLIAM F. GOWARD, of Boston, in the county of Suffolk and State of Massachusetts, have made an invention of an improved Device used for Manufacturing Confection; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawing making part of this specification, and in which—

Figure 1 is a perspective view, and

Figure 2 a vertical and longitudinal section of a device empodying my improvements;

Figure 3 being a perspective view of the board or plate carrying the pins for removing the confection, as hereinafter stated.

On the 4th day of January, 1870, Letters Patent of the United States No. 98,615 were issued to William C. Murdock and Edgar K. Haynes for apparatus for making confection, such invention consisting of a flat tablet provided with a series of circular wells or molds, into which the sugar confection was placed to impart the proper shape to each object; of a flat plate or board furnished with a series of pins or wires in numbers or disposition equal or about so to that of the molds, and which are inserted in the confection poured into the latter, in order that this confection, when cool, shall adhere to the pins and be drawn with them from out the molds; and lastly, of a thin plate or false bottom, so called, preferably of tin, punctured with holes, and passed over the pins previous to their insertion into the confection, the purpose of this plate being to the more readily and expeditiously strip the "drops" or other articles of confection from off the pins than could be done by removing each individually by hand, as was the practice previous to the introduction of this patented device, the false bottom, which might be of metal or of paper, or of both combined, also serving to hold the confection in some cases while cooling.

While the above-mentioned patented device was a great improvement over anything that has preceded it, I have found, in daily use of it in an extensive business, that much time is consumed, and more or less annoyance experienced, in applying to place, and in starting up and pulling away the metal plate or false bottom, which adheres to the board in which the pins are mounted; and my present improvements, which are based upon the principle embodied in such Letters Patent, are intended to effect in an easy and expeditious manner, the stripping of the confection from off the pins; and to this end I abandon the use of the false bottom, and in place thereof employ one or more flat thin metallic fingers applied to a suitable frame, and so arranged as to be instantly passed between the pins and below the confection, a lowering of the tablet containing such confection having the effect of stripping it from off the pins.

The drawing accompanying this specification represents at A an upright frame or bench composed of two long sides, *a a*, and cross-bars or standards *b b*, uniting them in a substantial manner.

c c, &c., represent a series of flat plates secured to the upper side of the frame A, and spanning the inclosure intervening between its sides, these plates being substantially of equal size and shape, and arranged at regular intervals in parallelism to each other, and at right angles to the longest plane of the frame A, the ends of these plates or fingers upon one side of such frame overhanging the side *a*, as represented, and being by preferment reduced to a thin and somewhat rounded edge.

The board or plate upon which the pins before mentioned are mounted is shown at *d*, and the pins thereof at *e e*, &c., the rows of pins transversely of the board being equal or about so in number to that of the fingers *c c*, and, like them, disposed at regular intervals asunder.

A plate or board containing upon the points of each pin a confection-drop is presented to the bench A, and the fingers *c c* inserted between the transverse rows of pins and below the confection, adhering thereto, when by quickly lowering the plate the drops are stripped therefrom and precipitated into a receptacle placed to receive them.

Removed in this manner the drops or other articles of confection are precipitated promiscuously into the receptacle, but under some circumstances it is desirable and even necessary to deposit them upon a sheet of paper to cool and harden, and in order that I may be enabled to deposit them in this way very expeditiously, I provide a quantity of strips or sheets of paper of a width about equal to that of the plate *b*, and place one of them at a time flatwise upon the upper surface of the grid formed by the fingers or plates *c c*, the ends of the paper strip being securely held down to the grid by means of turn-buttons or cams *f f* applied one to each end of the frame A, and pivoted between the sides thereof in such manner that when their longest radius is turned toward the paper the latter shall be clamped firmly between the button and the outside finger.

Having thus secured the paper to the grid, I next invert the plate or board *d* and deposit it upon each grid, driving the pins through the sheet of paper; then releasing the buttons *f* and reversing the position of the board, the paper will be found adhering to it.

This release of the button or cam is effected by two studs, *a' a'*, applied to each end of the board, as

shown in fig. 2 of the drawing, which abuts against and depresses such button, the normal purpose of these studs being to serve as stops or gauges to determine the depth to which the pins shall extend into the confection. In order that these pins shall enter the paper in the proper position transversely thereof, I erect upon the frame, or of one side wall of the same, two posts or guides, *b'*, against which the end of the plate or board is pressed while lowering it and driving the pin through the paper.

One advantage of my present improvements is seen in the ease and celerity with which I affix the paper sheet to the plate, as herein explained, as the act of applying this paper to the metal false bottom by manual dexterity simply, as heretofore practiced, was a labor of time and difficulty, and uncertainty as to its results.

After the confection-drops have been stuck upon the pins, the board *d* is taken to the range of fingers *e e*, &c., which are inserted below the paper, and the board lowered, as hereinbefore stated, thus removing the sheet of paper with the confection-drops deposited upon it in regular order.

Under the old system of removing the drops by manual manipulation, in using the foraminous metal plate or false bottom below the paper, the pins *e e*, &c., frequently became more or less bent out of their regular order, and it is a matter of time and vexation to adapt the false bottom to them, as each pin must be inserted in its proper hole.

The various boards or plates *d*, of which a large number are used, are of uniform size, and are or should be adapted to a traveling frame duly supported and worked by a treadle, and so disposed with respect to the range of fingers *e e*, &c., that upon applying a board loaded with confection-drops to the frame, and depressing it by means of such treadle, the drops will be at once stripped from the pins and will fall into boxes or bins placed to receive them.

Claims.

I claim—

1. In combination with the plate *d* and its pins *e e*, or the mechanical equivalents of such parts, one or more flat plates or fingers so disposed with respect to the pins as to be readily inserted between them and below the confection adhering to them, for purposes hereinbefore set forth.

2. In combination, one or more fingers, arranged as described, and the turn-buttons or cams *f f*, or their equivalents, in manner and operating as explained.

3. In combination, the board or plate *d* with its pins *e e*, &c., the fingers *c c*, &c., properly mounted, and the buttons *f f*, or their equivalents, for purposes hereinbefore stated.

WILLIAM F. GOWARD.

Witnesses:

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FRED. CURTIS.