H. WATHEW.

Confection Pan.

No. 59,325. Patented Oct. 30, 1866.

Fig. 3.

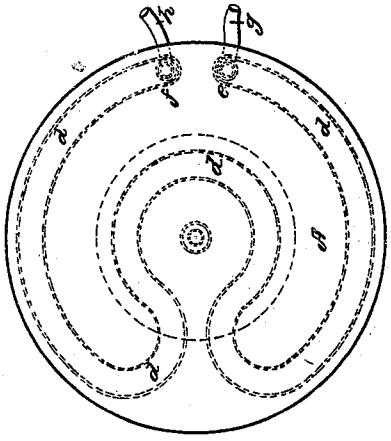


Fig. 4.

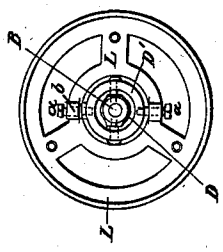


Fig. 1.

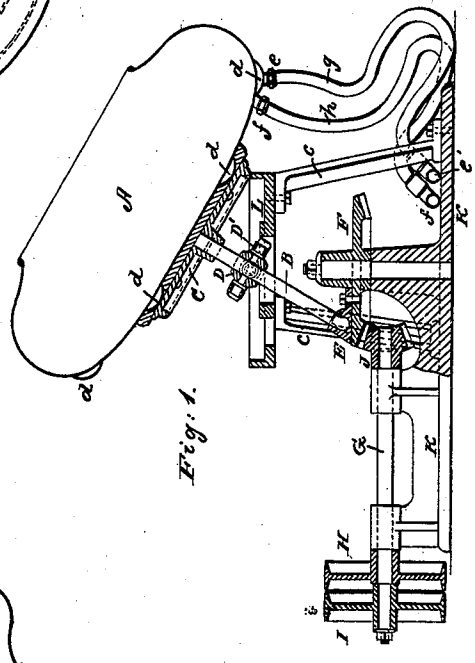
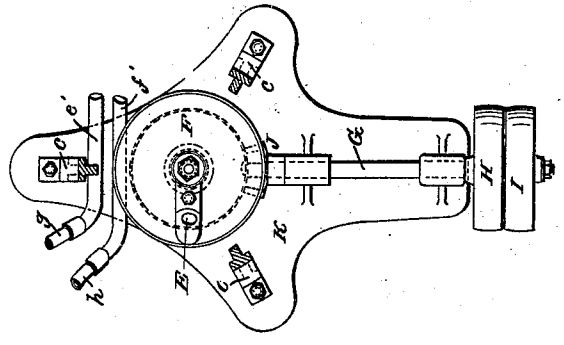


Fig. 2.



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UNITED STATES PATENT OFFICE.

HENRY WATHEW, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THOMAS MILLS AND GEORGE M. MILLS, OF SAME PLACE.

IMPROVEMENT IN CONFECTION-PANS.

Specification forming part of Letters Patent No. **59,325**, dated October 30, 1866.

To all whom it may concern:

Be it known that I, HENRY WATHEW, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Confection-Pans; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, and to the figures and letters of reference marked thereon.

My invention consists in an improved construction of apparatus used by confectioners for manufacturing sugar-coated articles, such as almonds and other kernels, and sugar-coated pills, &c. In the improved machine I avoid the use of open fires for drying and crystalizing the sugar upon the articles to be coated, and I employ in their place either steam or heated air, which, being more readily controllable, insure regularity and certainty of operation.

Another feature of my invention consists in imparting by a simple mechanism a peculiar wabbling motion to the pan, whereby the almonds, &c., to be coated are kept in the most advantageous kind of motion for rapid and regular progress of the coating operation.

A third item of importance in my invention consists in the manner in which the weight of the pan and its contents is supported by an annular bearing at or near the center of gravity, thus greatly releasing the driving-gear from undue strain.

In order that my said invention may be fully understood, I will now proceed more particularly to describe the same.

Upon reference to the drawings making part of this specification, and in which similar letters of reference allude to like parts in the several views—

Figure 1 is a sectional elevation of my improved apparatus. Fig. 2 is a plan of the same, the copper pan and upper part of mechanism removed. Fig. 3 is a plan of the pan, and Fig. 4 a detached plan of the mechanism removed in Fig. 2.

A is the copper pan, into which are placed the articles to be coated with sugar. It is secured upon the upper end of a shaft, B, by means of a flanged plate, C. This shaft B is, near the top, secured within a universal joint, of which D is the inner ring, and D′ the outer one; and the shaft B is suspended in the inclined position shown in Fig. 1 by having its lower end resting in a step-bearing, E, on the back of the bevel-wheel F.

G is the horizontal driving-shaft, provided at its outer end with fast and loose pulleys H and I, and giving motion to the wheel F, by means of its pinion J gearing with the same. The whole mechanism is erected upon a bed-plate, K.

The universal joint D D′ swings upon screws *a a* in lugs *b b*, provided on a circular casting, L, which rests on the three legs *c c*.

By supporting the weight of the pan A and its contents upon the outer edge of L in the manner seen in Fig. 1, the moving parts become perfectly balanced, and thus the driving-gears, step-bearing E, and universal joint D D′ are released from the undue strain to which they would be subjected by the overhanging weight of the pan in operation, which, with its contents, will sometimes weigh several hundred pounds.

The pan A is prevented from revolving upon its axis by having the shaft B rigidly held within the ring D of the universal joint, and the wabbling motion of the pan, thus held from revolving on its axis, causes the contents to roll around within the same in the most efficient manner for the operation of coating.

The sugar is added at intervals in the hot liquid state, as usual, while the pan is in motion, and the operation is continued until a coating of the desired thickness is obtained.

The means provided for heating the pan is as follows: Upon the outside of the dished bottom of pan A is a channel, *d d*, for the conveyance of steam or heated air, of which the former is generally most convenient to obtain. This channel is composed of an outer and inner circle, united, as seen in Fig. 3, so as to form a continuous pipe, which conveys the heat in an economical manner to that part of the pan where it is required to be most intense, and which pipe has an inlet, *e*, and outlet *f*, both of which are connected with supply-pipe *e′* and waste-pipe *f′*, respectively, by means of flexible tubes *g* and *h*, yielding to the movements of the pan while in operation.

Having thus described the construction and operation of my improved machine, I do not

desire to limit myself to the described arrangements of its parts in every minutia or detail; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The pan A, having the described wabbling motion imparted to it by means or devices equivalent to those herein set forth, and being provided with the described arrangement for heating by steam or hot air, the whole being arranged substantially as and for the purpose specified.

2. Supporting the weight of pan A at or near its center of gravity upon the annular bearing L, substantially as and for the purpose set forth.

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