Oct. 16, 1951 C. E. DASHWOOD 2,571,344

GRIDDLE CAKE MACHINE

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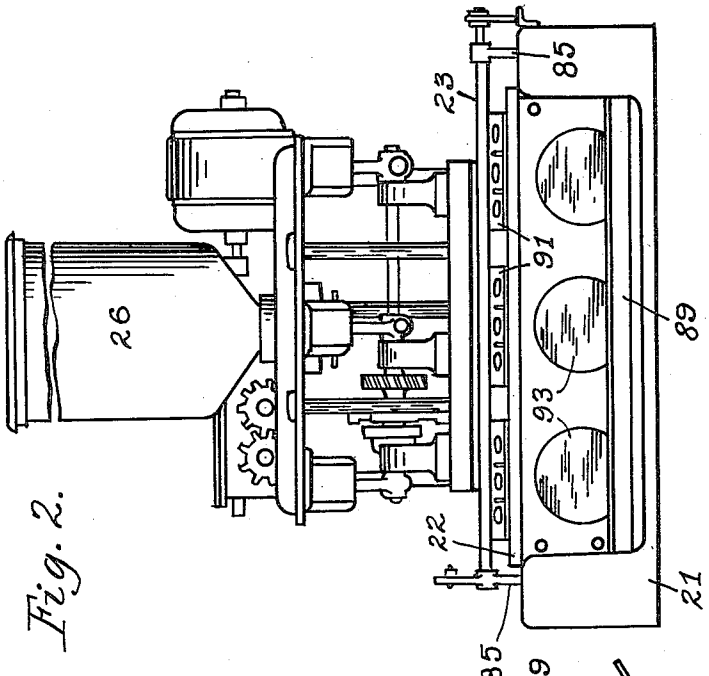


Fig. 2.

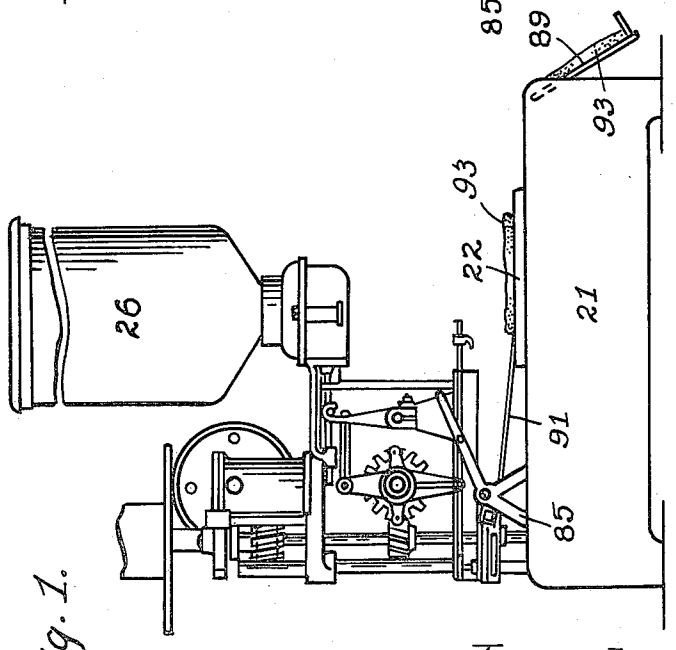


Fig. 1.

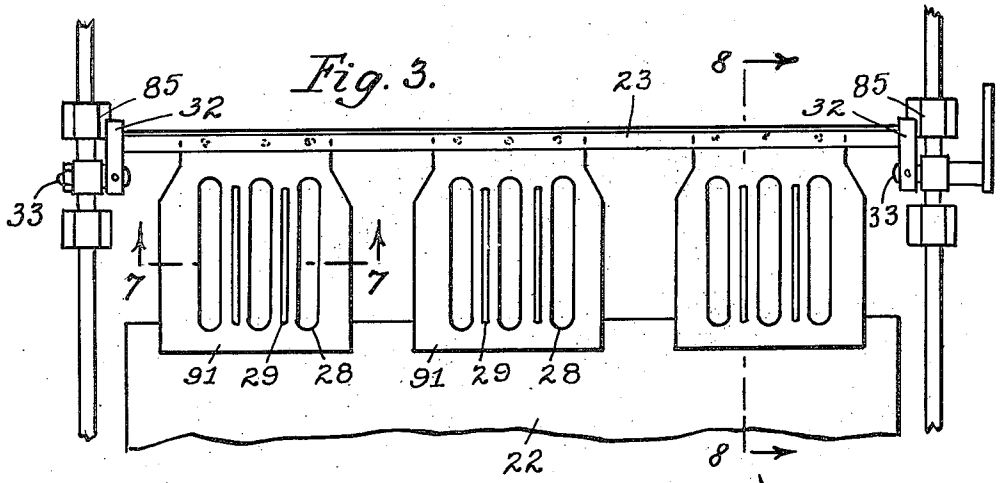
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GRIDDLE CAKE MACHINE

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Fig. 3.



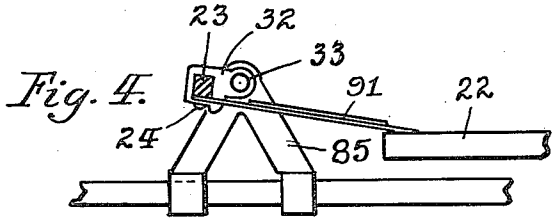


Fig. 4.

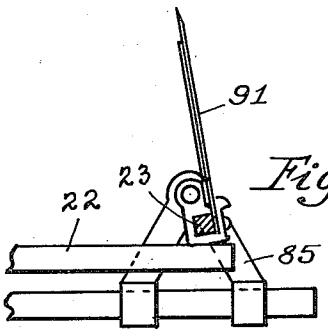


Fig. 5.

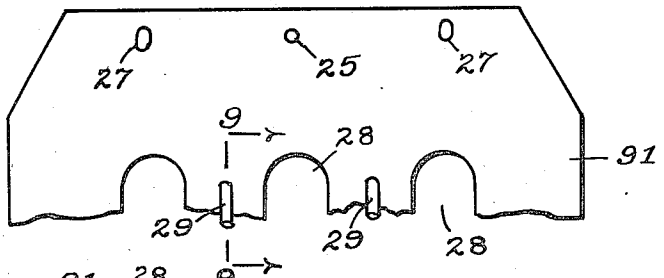


Fig. 6.

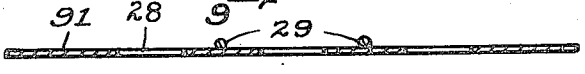


Fig. 7.



Fig. 8.

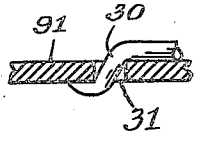


Fig. 9.

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Fig. 10.

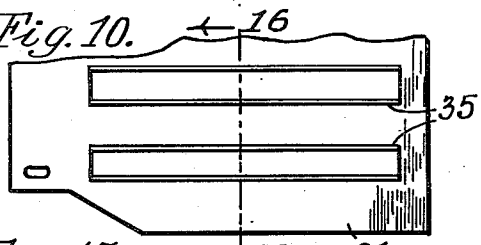


Fig. 15.

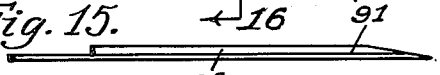


Fig. 16.

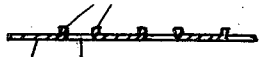


Fig. 13.

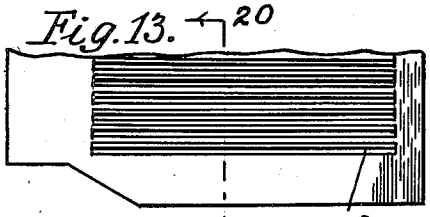


Fig. 20.



Fig. 11.

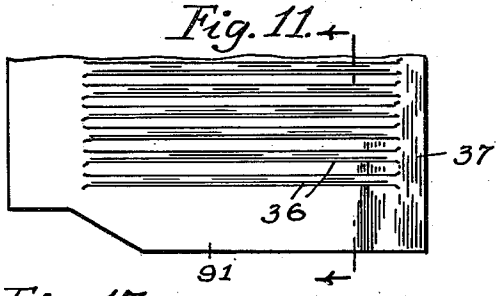


Fig. 17.

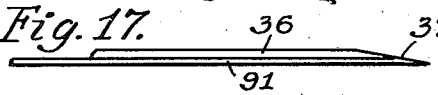


Fig. 18.

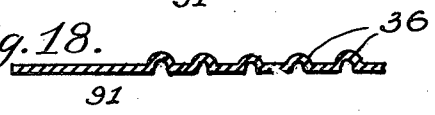


Fig. 12.

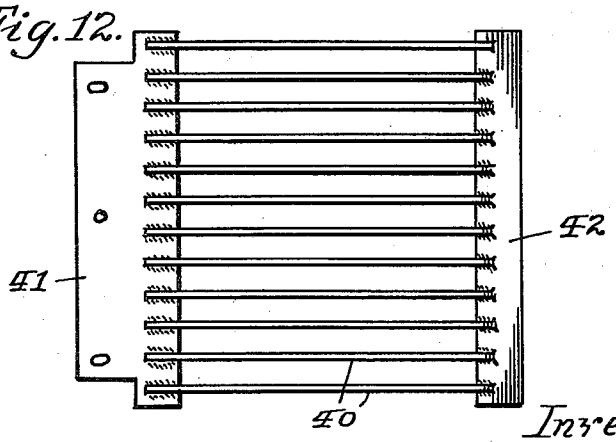
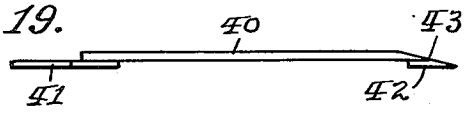


Fig. 19.



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Patented Oct. 16, 1951

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UNITED STATES PATENT OFFICE

2,571,344

GRIDDLE CAKE MACHINE

Charles E. Dashwood, Los Angeles, Calif., assignor to C. E. Doolin

Application May 6, 1947, Serial No. 746,186

1 Claim. (Cl. 99—423)

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My invention relates to improvements in griddle cake machines and more particularly to that type of machine which is described in companion application for Letters Patent Serial No. 704,788, filed October 21, 1946, and assigned to myself. In the machine set forth in said application, which for convenience is termed the Dashwood machine, each griddle cake is turned over on a stationary griddle to bake both sides and is discharged from the machine after being baked. An automatically controlled amount of batter is also placed on the griddle before each baking operation, all of said functions being in time controlled sequence, whereby griddle cakes of regulated size are automatically produced, said cakes being thoroughly and not over or under baked.

It has been found that in the use of the Dashwood machine there is a tendency for the griddle cakes to stick to the griddle which causes the peel to function improperly, thus leaving portions of the cakes adhering and sticking to the griddle, which is highly objectionable. It is an object of the present invention to overcome this objection in a simple and effective manner. It is further an object to improve the speed and smoothness of operation of the machine through the use of an improved form of peel which most effectively cleans and removes all objectionable particles of a cake during each pick up movement. Another object is to apply these improved features to a plurality of peels in the machine so that in cooperation they assist in producing a plurality of griddle cakes simultaneously without any of the objectionable features produced by the type of peel employed in the Dashwood machine.

Among other objects are maximum simplicity of construction and increased effectiveness in use.

In the accompanying drawings forming part of this specification, Fig. 1 is a side elevation of the type of machine of the general character set forth in said companion application above identified, showing my improved peel applied thereto and in position to turn or flip a griddle cake over on the griddle; Fig. 2 is a front elevation of the structure shown in Fig. 1; Fig. 3 is a plan of a detail portion of the griddle cake machine at enlarged scale showing a set of my improved peels juxtaposed to the griddle in position to engage griddle cakes thereon; Fig. 4 is a side elevation of a portion of the griddle cake machine and the peels shown in Fig. 3, the supporting shaft for the peels being illustrated in section; Fig. 5 is a side elevation of the portion of the apparatus shown in Fig. 4, showing the peel in raised position which is assumed when turning a griddle cake over after baking on one side; Fig. 6 is a plan of a detail portion of one of my improved peels shown in Fig. 3; Fig. 7 is a section at enlarged scale taken on the line 7—7 of Fig. 3; Fig. 8 is a section at enlarged scale taken on the line 8—8 of Fig. 3; Fig. 9 is a section at enlarged scale, taken on the line 9—9 of Fig. 6; Figs. 10, 11, 12 and 13 are plan views of alternative constructions of my improved peel; Fig. 15 is a side edge elevation of the structure shown in Fig. 10; Fig. 16 is a section of a detail taken on line 16—16 of Fig. 10; Fig. 17 is a side elevation of the structure shown in Fig. 11; Fig. 18 is a section of a detail at enlarged scale taken on line 18—18 of Fig. 11; Fig. 19 is a side edge elevation of the structure shown in Fig. 12; and Fig. 20 is a section at enlarged scale taken on the line 20—20 of Fig. 13.

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In Figs. 1 and 2 are illustrated a griddle cake machine of a type illustrated in the companion application above identified, to which my improved peel is applicable, and in which for convenience, the supporting base in the present application is correspondingly identified by the reference ordinal 21, the stationary griddle is indicated by 22 and the reciprocable carriage members are indicated by 85. In the companion application the carriage members 85 are reciprocated forwardly and backwardly on the base 21, through cooperating actuating mechanism and cause the peels 91 in the first forward movement to engage and flip the griddle cakes 93, over on the griddle. The peels are next returned to starting position by the carriage. After baking the griddle cakes on both sides for a predetermined period the peels are again moved forward and remove the griddle cakes onto an inclined receiver 89. The peels are finally returned by the reverse movement of the carriage supports 85 to starting position in readiness to repeat the operation. These movements are in synchronism with each other and with the operation of an overhead batter feed reservoir 26.

Three peels 91, or any suitable number are shown or specified as in the Dashwood machine, each peel however in my improved construction consists of a thin blade or plate as shown in detail in Figs. 3 to 9 inclusive. These plates are secured at their rearward end portions to the lower side of a transverse shaft 23, the mode of connecting being by screws or bolts 24 (Fig. 4), or other suitable fastening means which engage through a center pivot hole 25 (Fig. 6), and a pair of side slots 27. The slots permit swinging movement and adjustment in fastening each plate, whereby the forward sharpened edge portion of the plates may be adjusted to slide under the griddle cakes and in close contact over the surface of the griddle, thereby cleaning the griddle automatically by each stroke of the peels.

Each peel plate is provided with three or any number of longitudinal slots 28, as in the Dashwood machine, but these slots have been found to be ineffective in relieving adhesion and surface tension of the cakes on the griddle as the cakes are lifted, turned or slid off of the griddle. They permit unwanted fragments of food to fall or drop below the peels, that would be messy to

the food product which is being processed or that would interfere with the preferred direction of travel of the griddle cakes. To reduce adhesion, surface tension and surface travel resistance on the griddle, I provide the peel with two or any suitable number of parallel longitudinal cake lifting and guiding track rails **29**, which are disposed as shown between the slots **28**. Each rail consists of a section of flexible wire or rod, preferably composed of smooth surfaced metal or other suitable material, the ends **30** of which are engaged downwardly through perforations **31** in the peel plate (Fig. 9), so as to hold the rails firmly in place on the surface of the peel. In this manner the track rails can be easily removed for cleaning or replacement. The track rails may be of any suitable size, length, number and spacing that will assist in releasing the griddle cakes from the griddle and in guiding them in a forward path.

The shaft **23** upon which the peels are carried is mounted upon the outer end portions of a pair of rocker arms **32** (Fig. 4), which are underslung by coaxially disposed pivot connections **33** on the pair of carriage members **85**. In this manner the peel plates are normally supported at a lowered inclination so as to more effectively scoop up the griddle cakes during the functioning of the peels. Also in the turnover cycle of operation of the peels, the griddle cakes have a shorter distance to drop or travel onto the griddle or other processing surface from the peel. The shorter distance to drop or travel avoids splashing of the batter and assists in producing griddle cakes of more even thickness and more even texture and color on both sides and consequent eye appeal and quality.

Various modifications in the construction of my improved peel are contemplated within the spirit of the invention, among which are the following: In Figs. 10, 15 and 16 the longitudinal side edges of the slots **28** are turned up and form pairs of longitudinal and parallel track bars or rails **35**, which function in the same manner as that of the track rails shown and described in connection with the construction shown in Figs. 3 to 9 inclusive, to break the surface tension and strip the griddle cakes off of the griddle, leaving a clean surface on the griddle.

In Figs. 11, 17 and 18 the peel plate **91** is provided with a corrugated surface, the corrugations **36** being elevated above and traversing the surface of the peel longitudinally. In this modification longitudinal slots are omitted and the corrugations are relied upon to break the adhesion and surface tension of the cakes. The forward portions of the corrugations and the forward contact edge portion of the peel plate are tapered and blended to a sharp cutting edge **37**, which serves to assist in engaging the cakes and guiding them onto the surface of the peel during each cycle of operation.

In Figs. 13 and 20 a suitable number of longitudinal rails **38** are formed by lancing the plate **91** constituting the peel and turning up one edge along each lance. It is also contemplated that both edges may be turned up to form a pair of rails.

In Figs. 12 and 19, the peel is formed by a series of parallel, longitudinal and transversely spaced rails **40**, of suitable number, size and cross sectional shape, which are spot welded or suitably fastened to a transverse mounting plate **41**. The forward ends of these rails are fastened by welding or other suitable means in transverse spaced relation to each other on a forward transverse griddle contact blade **42**. The rails and contact blade are tapered and blended at **43** to a transverse comparatively sharp forward edge.

My invention is applicable for various uses within the spirit thereof, and is not confined to making griddle cakes. For instance it may be used for frying, cooking or processing eggs, egg omelets, hamburger, sausage patties, meat cuts, cakes, and various food ingredients or other articles.

In accordance with the patent statutes, I have described the principles of operation of my invention, together with the construction which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth within the spirit thereof and the scope of the following claim.

I claim:

In a griddle cake making machine, a griddle, a pair of guide rails extending along each side of said griddle, a slide on each rail, a peel support connecting said slides and arranged to move to and fro above said griddle, said peel support being rockably mounted to permit the support to swing in an arcuate pathway, a peel plate adjustably secured to said peel support and being pivoted thereto intermediate its side edges at one end there, said peel plate being formed of flexible metal and with a sharpened edge opposite the point of pivotal connection, screw and slot connections between the peel support and peel plate on opposite sides of the pivotal connection and adjacent the side edges of the peel plate to permit the same to be adjusted to a predetermined position on its pivotal connection and locked and held in said position by said screw and slot connections, a series of rods on the upper face of said peel plate extending longitudinally of said peel in spaced apart locations with their ends angularly bent and received in elongated openings in said peel to permit the peel to flex independently of said rods, whereby a griddle cake being removed from the griddle will slide along said rods and will be held in spaced relation from the peel during its travel upwardly thereon to separate the griddle cake from the peel various distances dependent upon the degree of flexing of said peel, said peel being provided with longitudinal slots extending parallel with said rods and arranged on each side thereof to prevent the adherence of the griddle cake and destroy the vacuum between the cake and the peel plate.

CHARLES E. DASHWOOD.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,148,129	Taylor	July 27, 1915
1,557,884	Schlager	Oct. 20, 1925
1,795,828	Brand	Mar. 10, 1931
1,809,004	Vierling et al.	June 9, 1931
1,869,540	Brand	Aug. 2, 1932
1,932,474	Penhaligen	Oct. 31, 1933
2,003,541	Jawort	June 4, 1935
2,015,358	Brokvist	Sept. 24, 1935