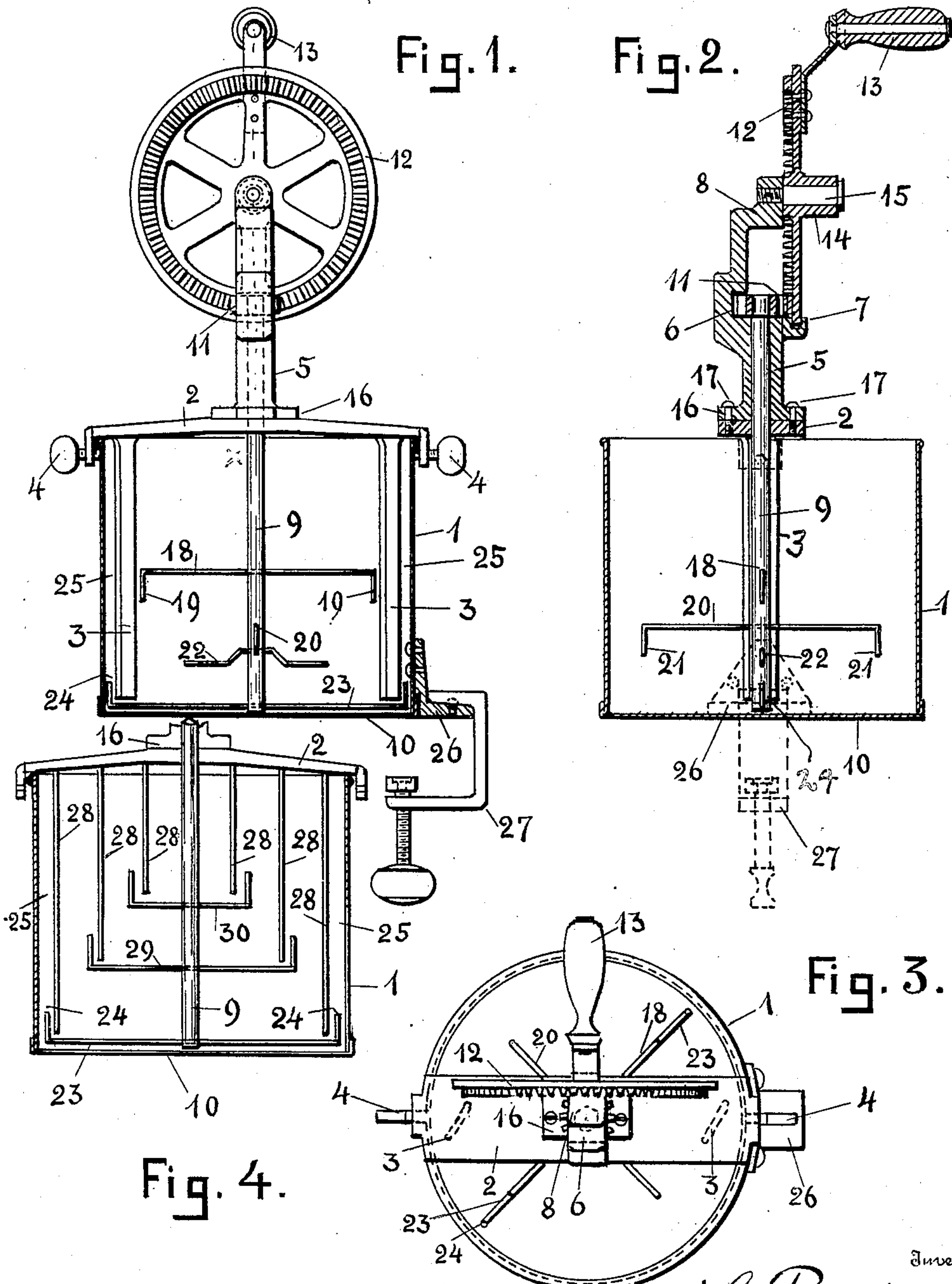


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H. L. BRAHAM.
CAKE MIXER.

APPLICATION FILED FEB. 15, 1906.



Witness

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HARRY L. BRAHAM, OF CINCINNATI, OHIO.

CAKE-MIXER.

No. 832,235.

Specification of Letters Patent.

Patented Oct. 2, 1906.

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To all whom it may concern:

Be it known that I, HARRY L. BRAHAM, a citizen of the United States, residing at the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Cake-Mixers, of which the following is a specification.

The object of my invention is to produce a cheap, simple, and efficient device for mixing cakes, whipping cream, beating eggs, or for similar purposes.

The dasher in my cake-mixer is so formed and constructed that it will thoroughly and properly mix the ingredients which have been placed in it and produce perfect assimilation, so that an even and uniform mixture is the result.

Uniformity and a proper mixture of the parts which go to make up the cake is a great desideratum in cake-making.

In the accompanying drawings, forming part of this specification, Figure 1 is a sectional view of the receptacle or bucket, the balance of the device being shown in elevation. Fig. 2 is a sectional view taken on lines X X of Fig. 1. Fig. 3 is a top view of the device. Fig. 4 is a sectional view of the bucket or receptacle, showing in elevation a modified view of the dasher mechanism.

A receptacle or bucket, as 1, of any shape or material, is employed by me for holding the articles to be mixed. For the purpose of admitting the free circulation of air I prefer to allow the receptacle 1 to be open at the top. Across the top of the receptacle 1, equidistant from its sides, I place a bridge or arbor 2, of any shape, contour, or construction, preferably high in the center. This bridge 2 has depending from it near its ends on each side a partition, stationary dasher, or blade 3. These blades 3 are set at an acute angle lengthwise to the sides of the receptacle, but may be set at any other angle desired.

The blades 3 are made integral with the bridge 2. The bridge is held on the receptacle by means of thumb-screw device 4. It may be held in place in any other desired manner. On the bridge 2 at its center I connect, in a permanent and rigid manner, an upright supporting-frame, formed of a sleeve 5, housing 6, guard 7, and arm 8. A shaft 9 passes through the sleeve 5 down through the bridge 2 to the bottom 10 of the receptacle. At its upper end the shaft 9 carries a small pinion-gear 11, suitably held in place in the housing 6, which forms a pocket or guard for

said pinion. A large gear-wheel 12, having a handle 13, is connected to the supporting-frame at arm 8 by having its sleeve 14 passing over and revolving on a headed pin 15, which also keeps said gear 12 in place, the guard 7 also keeping the gear 12 in proper alinement.

As before stated, the supporting-frame-work is rigidly attached to the bridge 2. This is usually done by a plate 16, connected to the bridge 2 by screws 17. It may be connected in any other manner.

On the shaft 9 I provide and connect in any suitable manner a series of dashers, beaters, blades, or cutters, as shown. On the shaft 9 midway of the receptacle I provide a dasher-blade, as 18, having at its end depending arms 19. Next below on the shaft I provide a dasher-blade, as 20, having depending arms 21. The dasher 20 is set at a right angle to dasher 18. Next below on shaft 9 I provide short dasher-blade 22. This dasher is bent up in the center, as shown. (See Fig. 1.) This dasher 22 is set at right angles to dasher 20, and near the bottom of the shaft I provide the dasher-blade 23, having at its ends upwardly-extending arms 24.

Between the sides of the receptacle 1 and the edges of the stationary blades or partition 3 I leave a space 25. The arms 24 on the dasher 23 pass up into this space.

By means of a plate and foot-piece 26 and a clamp 27 the device is secured to the table or place where it is to be used. It may be fastened in any other desired manner.

In the modified form in Fig. 4 I provide, instead of blades, as 3, a series of stationary depending wires, as 28, extending down from the bridge 2, and provide on the shaft 9 the usual dasher 23 and blades, as 29 and 30, which revolve with the shaft, the blades 23, 29, and 30 having at their ends upturned arms, as shown in said Fig. 4.

It will be seen that my construction enables me (by turning the thumb-screws 4 in the proper direction) to lift the entire mechanism out of and away from the receptacle 1, enabling me to readily remove the contents of the receptacle and to thoroughly clean it. My operating and driving mechanism are up away from the receptacle-mouth, so that cleanliness is insured and there is no interference with the proper working of the contents in the receptacle.

It will readily be apparent how my device operates. The articles to be operated upon

are placed in the receptacle 1 and the beating mechanism put in position. The gear 12 is turned by means of handle 13, the teeth on said gear 12 meshing with the teeth on the driving-pinion 11, which pinion being secured to the upper end of shaft 9 turns said shaft, and the dashers and blades being attached to the shaft 9 turn with it, passing through the dough or plastic material in the receptacle. In passing through the dough or plastic material the revolving dasher-blades whip, churn, agitate, and mix the contents of the receptacle, producing a centrifugal action, and in this action the contents of the receptacle being thrown and pulled come in contact with the stationary dashers 3, which interrupt the circuit of said contents and force it aside, the dashers again catching it and forcing it onward in its centrifugal course. Thus by this interruption and continuing in the circuit the dough or contents of the receptacle is thoroughly mixed and intermingled, the dough when it thickens being pulled between the revolving and stationary dashers. This pulling of the dough is thoroughly done by the construction shown in Fig. 4, in which more stationary dashers are present. This pulling of the dough is the same as kneading it. The dashers 3 being set at an acute angle, the dough will be properly interrupted, but not sufficiently to make the device work hard. The loose and mixing articles in the receptacle, which strike the dashers and sides of the receptacle, will run down on said dashers and be carried away and removed by the arms 24 on dasher 23, which operates in the space 25, preventing the dough from sticking or coagulating on the dashers and sides of the receptacle at its bottom. By the peculiar formation of these thin dashers and the provision of ample space between them and between the stationary dashers and the wall of the receptacle a free circulation of air results, which is a great desideratum in properly making dough.

I may use any number of dashers and form them in any desired shape and connect them in any manner. I may use any kind of driving mechanism for operating the shaft and dashers.

I may dispose the stationary dashers around the receptacle in any desired manner.

The dasher-blades on the shaft may be of any length, placed at any distance from one another, and have their ends shaped and bent as desired. I may place the stationary dashers at any angle other than herein set forth.

The device can be used for mixing any other articles or ingredients together to form a common mass.

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

1. In a cake-mixer, a receptacle, a bridge, said bridge crossing the receptacle and at-

tached thereto, stationary dashers in said receptacle attached to said bridge, a space provided between the said stationary dashers and the side of the receptacle, in combination with a revolving shaft, a series of dasher-blades on said shaft, said dashers extending laterally from said shaft and driving mechanism, as and for the purposes set forth.

2. In a cake-mixer, a receptacle, a bridge, said bridge crossing the receptacle and removably attached thereto, stationary dashers in said receptacle, said stationary dashers depending from said bridge, a space provided between the said dashers and the side of the receptacle, said stationary dashers standing at an acute angle in said receptacle with relation to the side thereof, in combination with a revolving shaft, a series of dasher-blades on said shaft and driving mechanism, as and for the purposes set forth.

3. In a cake-mixer, a bridge, said bridge crossing the receptacle and removably attached thereto, stationary dashers in said receptacle, said dashers made integral with said bridge, a space provided between the said dashers and the side of the receptacle, in combination with a revolving shaft, a series of dasher-blades on said shaft, the end of one dasher extending between the stationary dashers and the side of the receptacle and driving mechanism, as and for the purposes set forth.

4. In a cake-mixer, a receptacle, a bridge, said bridge closing the receptacle and removably attached thereto, stationary dashers in said receptacle, said dashers made integral with said bridge and standing in the receptacle at an acute angle with relation to the side of the receptacle, a space provided between the dashers and side of the receptacle, in combination with a revolving shaft, a series of dasher-blades on said shaft, and driving mechanism, as and for the purposes set forth.

5. In a cake-mixer, a receptacle, a bridge, said bridge crossing said receptacle, a series of stationary dashers, said dashers depending from said bridge at intervals, a revolving shaft and driving mechanism, a series of dasher-blades attached to said shaft, said dashers on the revolving shaft passing between said stationary dashers to mix the contents of the receptacle and to pull the dough from between the two sets of dashers, as the dashers revolve.

6. In a cake-mixer, a receptacle, a bridge, said bridge crossing said receptacle, a series of stationary dashers, said dashers depending from said bridge, a revolving shaft and driving mechanism, a series of dashers on said shaft, one above the other and set at angles to each other, the ends of some of said dasher-blades being abrupt and some bent, the lower revolving dasher having upturned ends which pass between the stationary dasher

and the side of the receptacle, as and for the purposes set forth.

5 7. In a cake-mixer, a receptacle, a bridge, said bridge crossing said receptacle, a series of stationary dashers depending from said bridge, a revolving shaft and driving mechanism, a series of dasher-blades on said shaft, said dasher-blades being of unequal lengths

and disposed at various heights on said shaft, the revolving dashers having upturned ends, 10 as and for the purposes set forth.

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Witnesses:

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