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J. B. WINFREE, JR.

CAKE TRIMMER.

APPLICATION FILED FEB. 17, 1906.

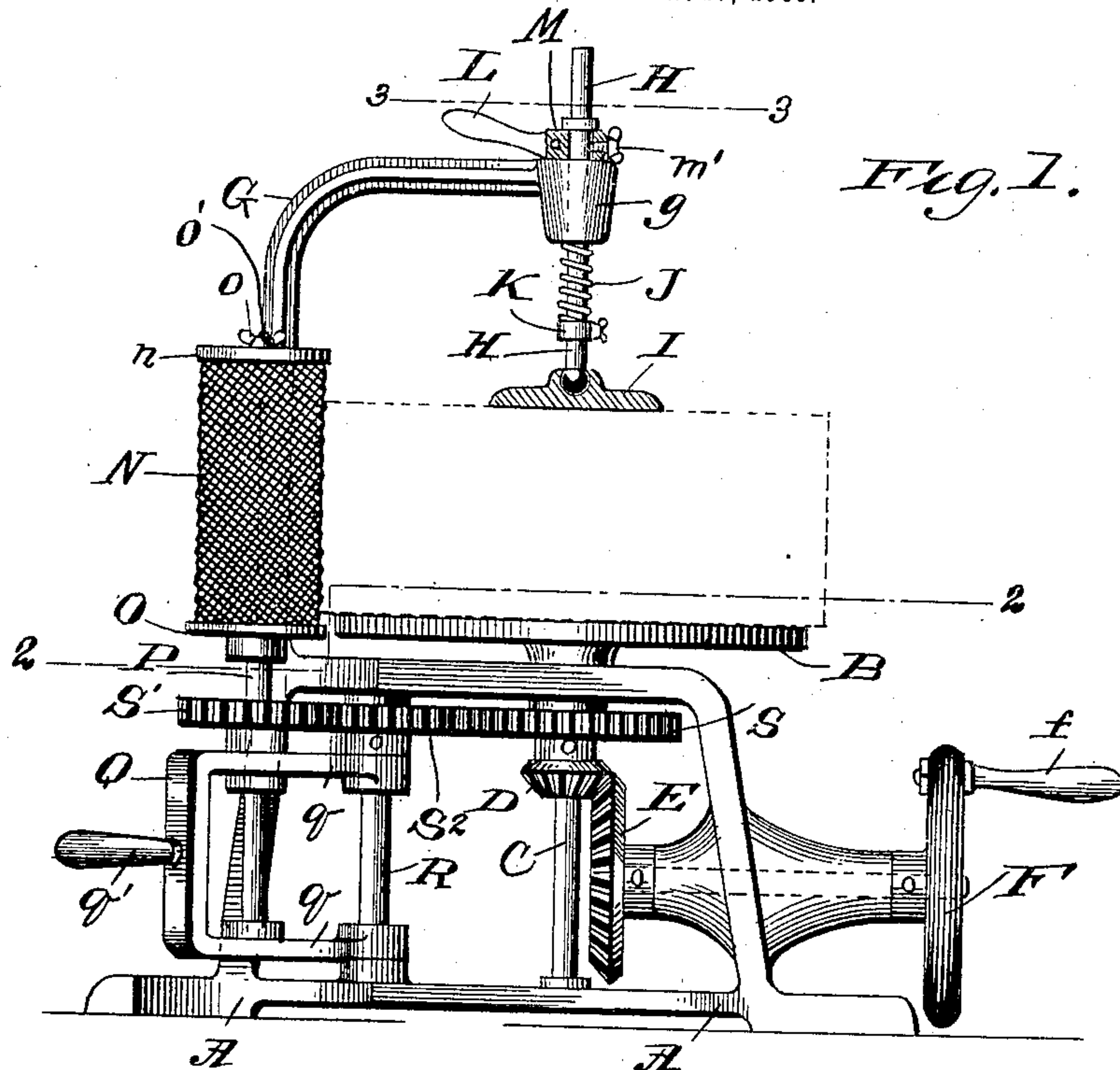


Fig. 1.

Fig. 2.

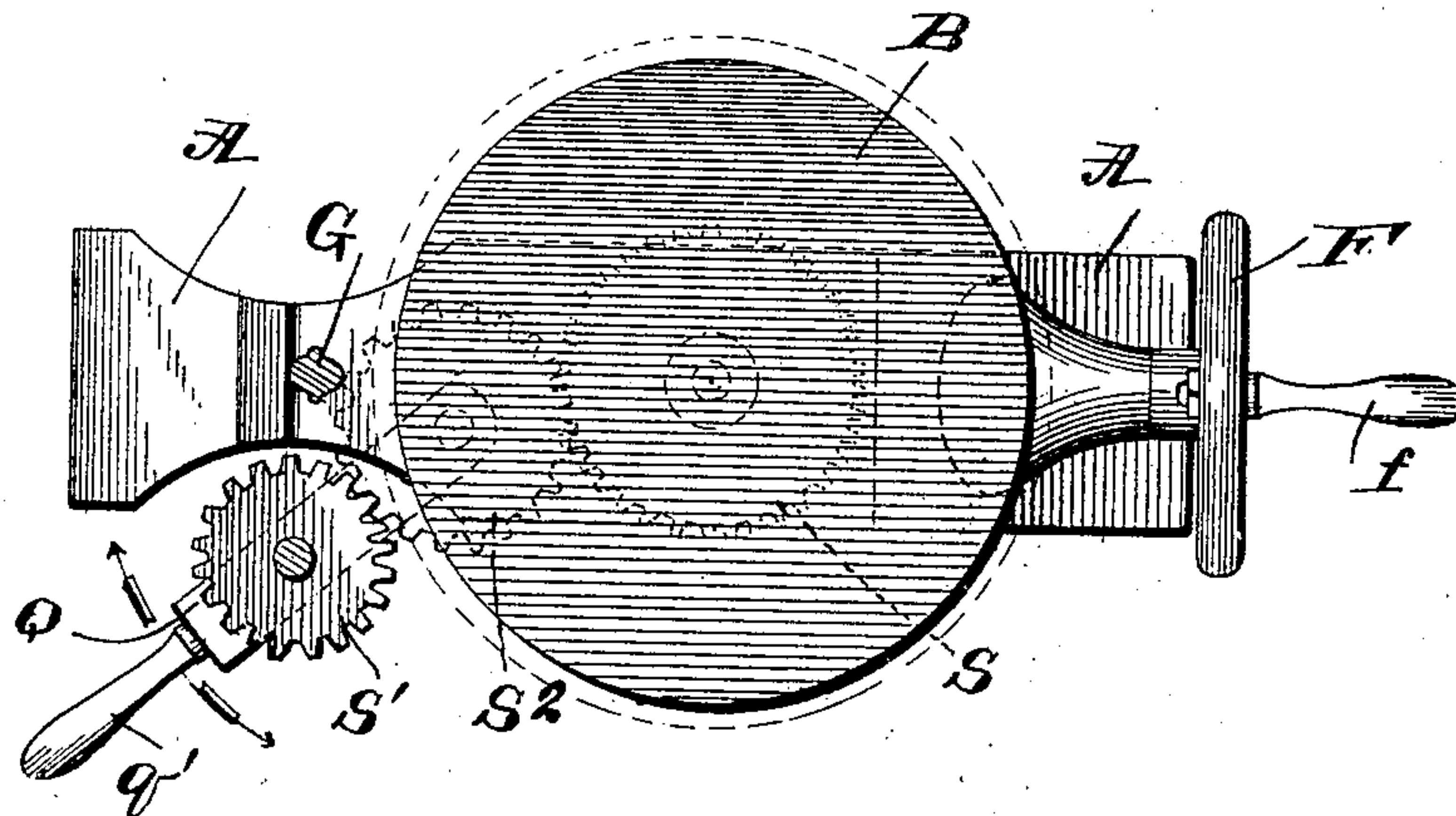


Fig. 3.

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CAKE-TRIMMER.

No. 835,341.

Specification of Letters Patent.

Patented Nov. 6, 1906.

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To all whom it may concern:

Be it known that I, JOHN BELL WINFREE, Jr., a citizen of the United States, and a resident of Lynchburg, in the county of Campbell and State of Virginia, have invented a new and Improved Cake-Trimmer, of which the following is a specification.

My invention is an improvement in the class of machines adapted for trimming the edges of cakes, pies, and other baked articles to the required form.

The invention is embodied in the construction, arrangement, and combination of parts hereinafter described, and the novel features are specifically indicated in the claims.

In the accompanying drawings, Figure 1 is mainly a side elevation of the machine, some portions being shown in section for the sake of fuller illustration. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1. Fig. 3 is an enlarged horizontal section on the line 3 3 of Fig. 1.

The working parts of the invention are arranged and supported in and upon a skeleton frame A. The cake or other article to be trimmed is placed upon a horizontal circular table B, which is supported upon a vertical shaft C, that is journaled and stepped in the frame A, as shown in Fig. 1. The shaft C is provided with a bevel-pinion D, which meshes with a bevel-gear E, keyed upon a horizontal shaft journaled in the upper portion of the frame A and carrying at its outer end the balance and drive wheel F, having a handle f. By this means rotation may be imparted to the table B at any required speed. A curved bar or gooseneck G extends upward from the left-hand portion of the frame A, and a vertical rod H is arranged and adapted to slide in the enlarged head g of the gooseneck. This head is in vertical alignment with the shaft C, upon which the table B is mounted. A presser-plate I is loosely connected with the lower end of the rod H and in practice rests upon the top of the cake or other article to be trimmed. The loose connection referred to is formed by a ball-and-socket joint, as illustrated in section. A spiral spring J is coiled about the portion of the rod H below the gooseneck-head G, and its lower end presses upon a collar K, having a clamp-screw by which it may be secured upon the rod in any required position. By this means the tension and downward pressure of the spring upon the plate I may be adjusted or regulated at will. It will be un-

derstood that the function of the parts I and H is to hold the cake or other article fixed or steady in due position concentric with the supporting-table B and that pressure will at all times be slight.

When a cake or other article is to be placed upon the table B or removed therefrom, it is necessary that the presser-plate I should be raised to a due height to leave the space below it free. For convenience of use for effecting this result I employ the following means: A bifurcated lever L (see Figs. 1 and 3) is provided with a handle that extends laterally and upward at a slight angle. It is pivoted at l, near either end of the bifurcation, to a block M, which is provided with a vertical opening m, through which a rod H passes. A clamp-screw m' passes through the outer end of the block M and bears against the rod for clamping the block firmly thereto in any required adjustment. The ends of the bifurcation or fork are rounded on the under side, as shown in Fig. 1. It is apparent that by raising the free end of the lever L the rounded ends of the fork will ride upon the flat top side of the gooseneck-head g, and thus raise the rod H, and thereby also the presser-plate I, and if the lever be set in practically vertical position it will maintain such position, and thereby hold the presser-plate locked in elevated position.

The trimmer proper is a cylinder N, arranged in vertical position and mounted upon a swinging support and geared with the driving-shaft in such manner that it may be swung laterally into and out of contact with the edge of the cake or other article and rotated at the same time. The cylinder may be constructed in various ways. I prefer for the sake of cheapness and lightness to make it of sheet metal, which is slotted or cut out in such manner as to form outwardly-projecting portions that form in practice so many cutting or tearing devices adapted to work upon the edge of the cake or other article and remove eccentric portions thereof, leaving the edge rough, so as to present the desired appearance. It is to be understood, however, that I may adopt various constructions of the cylinder so long as it is capable of operating on the cake or other article in the required manner. The cylinder N is supported upon the circular horizontal plate or table O, which is fixed upon the head of the vertical rotatable shaft P, the same being journaled in a support Q, adapted to swing

upon the vertical shaft R, that is journaled in the upper and lower parallel portions of the frame A. A flanged cap *n* is applied to the upper end of the cylinder, and the same is clamped thereon for holding the cylinder proper in place in vertical position by means of a nut *o*, applied to a threaded rod *o'*, which is fixed in the center of the table O. The aforesaid support Q is formed of two horizontal arms *q*, whose outer ends are rigidly connected, the connecting portion being provided with a lever-handle *q'* for convenience of adjustment or manipulation, as will be presently described.

Rotation is imparted to the cylinder N by means of gearing arranged as follows: A large spur-gear S is mounted on the shaft C, that carries the cake-table B, and a similar gear S' is similarly mounted on the shaft P, that supports the circular table O. On the intermediate shaft R is arranged an idler or transmitting-gear S², which meshes with the gears S S', as shown in Figs. 1 and 2. It is apparent that the shaft P, being supported in the frame Q and the latter being pivoted in the shaft R, it will always swing concentric with the latter, and consequently with the idler or transmitting-gear S². Thus whatever be the position of the lateral swinging frame Q the cylinder N will be rotated whenever the driving-shaft is rotated. It is further apparent that while the cylinder is mounted upon the shaft and swings concentric with the shaft R it swings eccentric to the cake-table B, and consequently it may be swung into and out of contact with the edge of the cake or other article supported upon said table by simply shifting the frame Q from left to right and right to left.

The general operation of the machine has been already indicated above; but for the sake of details I will add that the circular cake or other article having been placed upon the rotatable table B and the presser-plate I lowered into contact therewith, as shown in Fig. 1, the operator swings the frame Q to the right, whereby the cylinder is moved from the position indicated in Figs. 1 and 2 into contact with the edge of the cake, and then by rotating the balance-wheel F and at the same time pressing inward gently upon the lever-handle *q'* of the frame Q both cake and cylinder will be rotated at due but different speeds, the cylinder thereby tearing away and gradually reducing the eccentric portions of the cake or other article, so that it is quickly reduced to circular form. This having been effected the frame Q is swung outward, thereby removing the cylinder from contact with the cake. It will be seen that the construction and arrangement of the frame and the table with reference to each other and the position of the trimmer or cutting-cylinder N are such that when the cylinder is swung laterally, as indicated in Fig. 2,

the table B is left practically entirely free or unobstructed on all sides save one, so that the cake or other article may be placed thereon or removed therefrom with the greatest facility and rapidity.

It will be understood that the invention is chiefly applicable and useful for trimming the edges of layer-cakes, which it expeditiously effects with economy of material or without breaking away any portion save that which is eccentric or too rough. Layer-cakes, as is well known, are made of successive layers of thin cake placed one upon another, jelly or other material being put between the several layers before the composite cake is cut or trimmed to remove the irregularity of the edges. It has been very difficult to cut the edges of such cake while it is hot without breaking away too much of the edge, whereby considerable loss and unsightly appearance resulted. My invention performs this operation in such manner that the cake is left in the best practical form.

What I claim is—

1. The improved cake-trimmer comprising a skeleton frame having a gooseneck and a spring-actuated presser supported therein, a horizontal rotatable table for supporting the cake, a vertical shaft supporting the same, and means for driving it at the required speed, a cylinder, and a vertical shaft supporting the same, the shaft and cylinder being arranged laterally from the cake-table and the cylinder having a roughened periphery to adapt it for trimming as described, swinging support in which such shaft is journaled and stepped, and gearing whereby the horizontal shaft is operatively connected with the drive-shaft for rotating the same, substantially as described.

2. In a cake-trimmer, the combination with a frame and a horizontal rotatable table for supporting a cake, a vertical shaft on which said table is supported, means for rotating the shaft at any required speed, of a counter-shaft stepped in the frame and arranged near the first-named shaft, a laterally-swinging arm journaled in the second shaft, a third shaft journaled in the said swinging arm, a trimmer supported on said shaft, and meshing gears keyed upon the three shafts, whereby the trimmer is rotated simultaneously with the cake-table and may be swung into and out of engagement with the edge of the cake, substantially as described.

3. In a cake-trimmer, the combination with a skeleton frame and a rotatable cake-table and a vertical rotatable shaft upon which the same is mounted, means for driving such shaft, the same being arranged below the table, of a vertical trimmer and its shaft, a horizontal arm carrying said shaft, and the latter being arranged below the plane of the table and laterally therefrom, and gearing connecting the three named shafts

whereby they rotate in unison, the parts being arranged as described whereby the cake-table is left free or unobstructed on all sides save one so that the cake may be readily placed thereon or removed therefrom, substantially as described.

4. In a cake-trimmer, the combination with the frame, a cake-supporting frame and its shaft journaled in said frame, and means for driving it, of a trimmer having a vertical shaft upon which it is supported, a swinging device in which said shaft is supported and journaled, and means for imparting rotation to said shaft, whereby it may be rotated and swung laterally into or out of contact with the edge of the cake, as described.

5. In a cake-trimmer, the combination, with a rotatable cake-table and its shaft, of a counter-shaft having a horizontal plate or table O fixed on its upper end exterior to the cake-table, a trimming-cylinder supported on such table, and means for clamping it detachably in place, substantially as described.

6. In a cake-trimmer, the combination with a cake-supporting table and a frame having a perforated guide-head arranged directly over the center of said table, of a presser-plate, a shaft connected therewith and slidable in said guide-head, and a spring and collar applied to the shaft below the

head whereby the presser-plate is normally pressed downward as described.

7. In a cake-trimmer, the combination with a horizontal table, of means for clamping a cake or other article thereon, the same comprising a portion of a rigid frame having a guide-head arranged directly over the center of said table, a rod adapted to slide in said head, a presser-plate attached to the lower end of the rod, a spring tending to press the rod downward, and a lever attachment applied to the rod above the head and adapted for raising the rod and plate as required, substantially as described.

8. The combination with the horizontal rotatable table, of a presser-plate, a frame having a guide-head arranged directly over the center of the table, a rod connected with the presser-plate and slidable in said head, a block clamped to the rod above the head, a lever pivoted to the block and one end thereof adapted to bear upon the head so that when the free end of the latter is raised the rod is drawn upward and may be locked in position, substantially as described.

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Witnesses:

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