

R. LEWIS & J. M. KINNAMAN.
 AUTOMATIC SANITARY BREAD SERVER.
 APPLICATION FILED NOV. 30, 1912.

1,064,503.

Patented June 10, 1913.

5 SHEETS—SHEET 1.

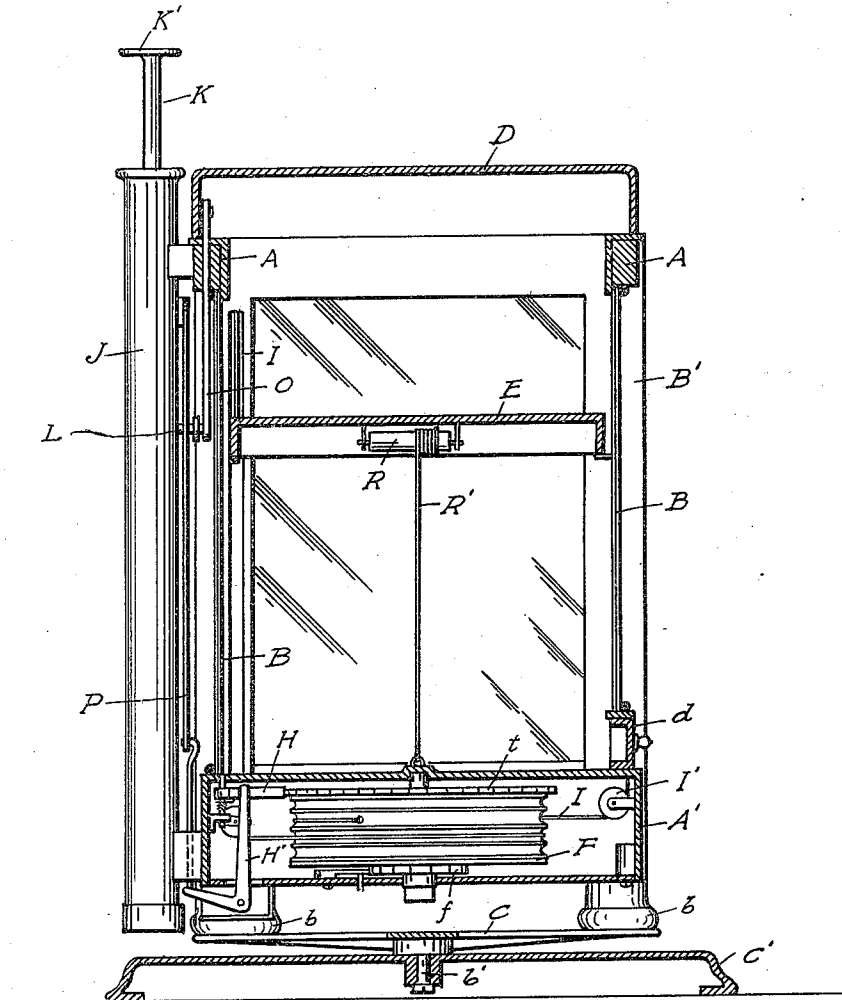


FIG. 1.

WITNESSES

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Marie Mitchell

INVENTORS:

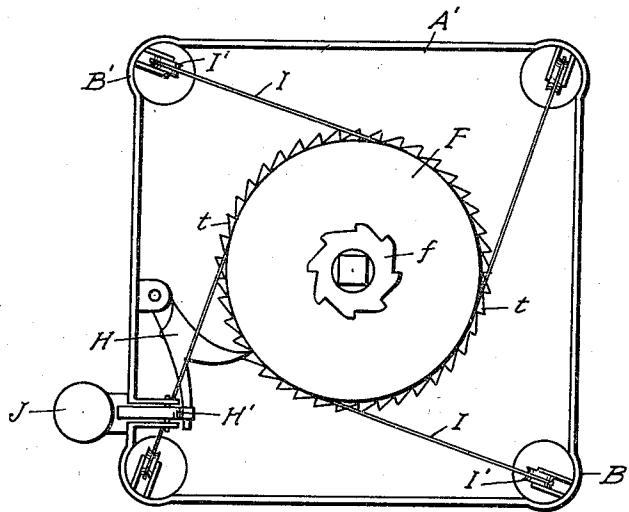
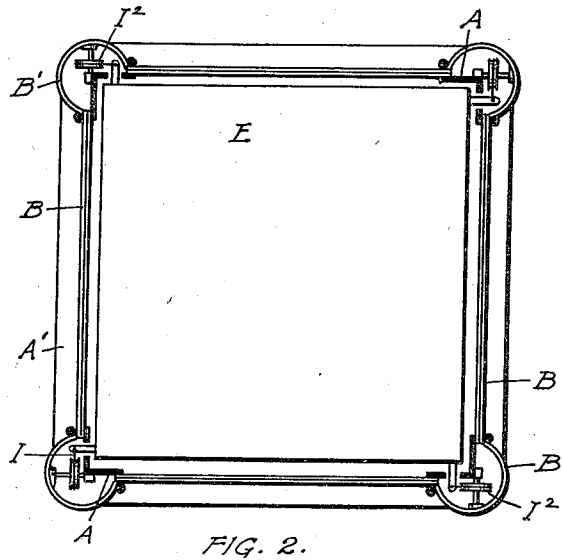
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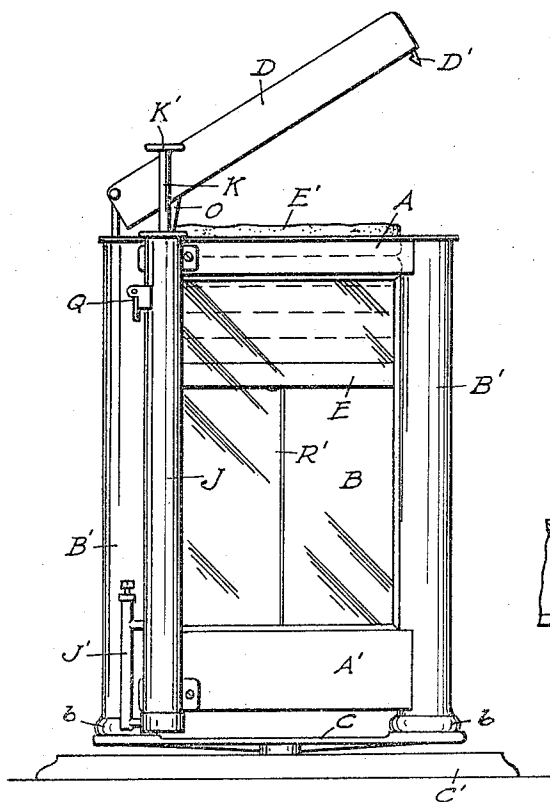


FIG. 4.

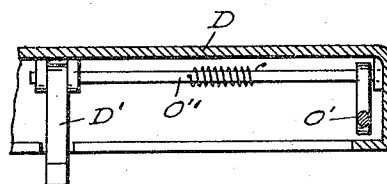


FIG. 6.

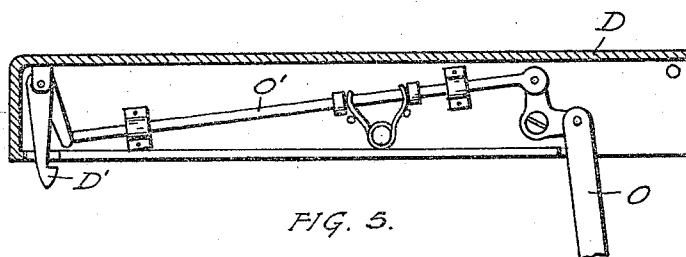


FIG. 5.

WITNESSES

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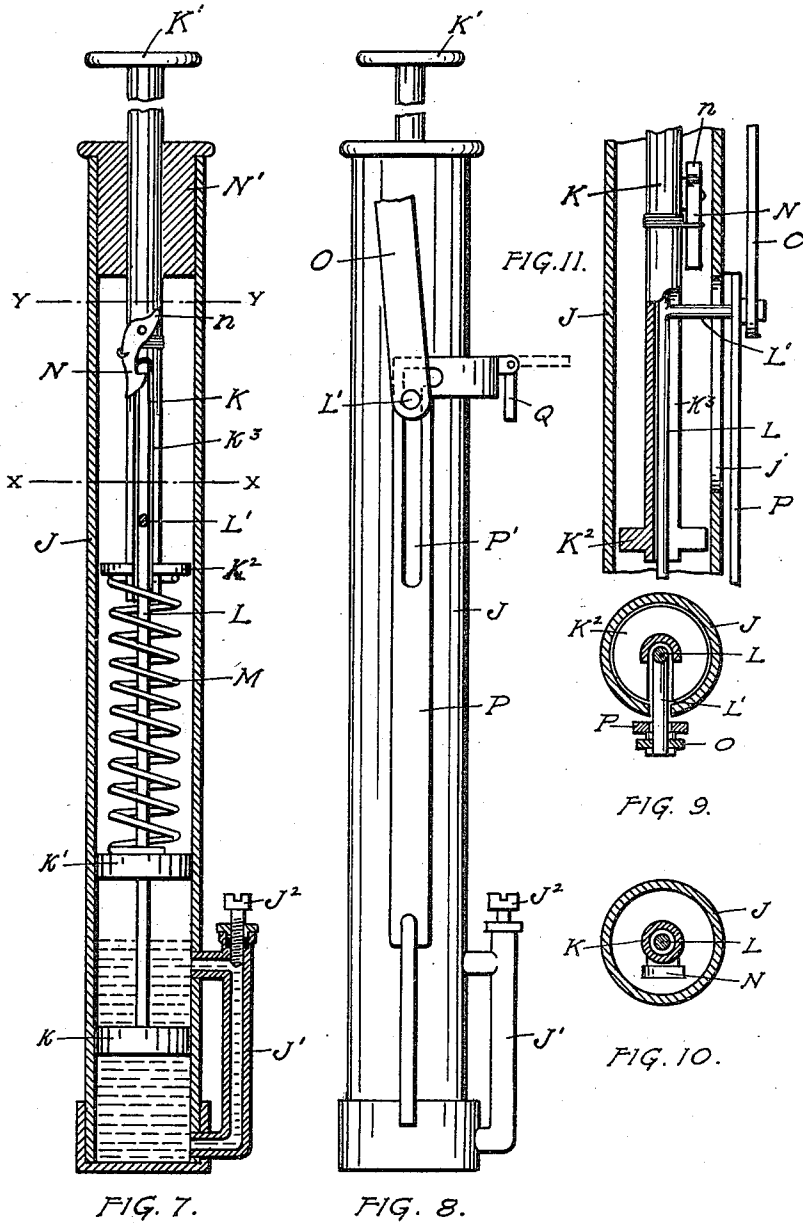
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5 SHEETS—SHEET 4.



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5 SHEETS—SHEET 5.

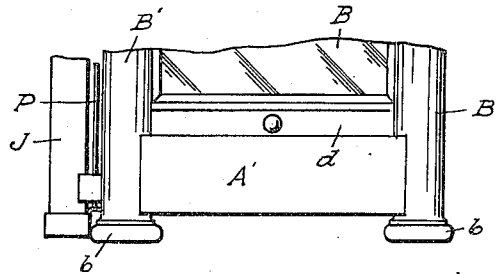


FIG. 14.

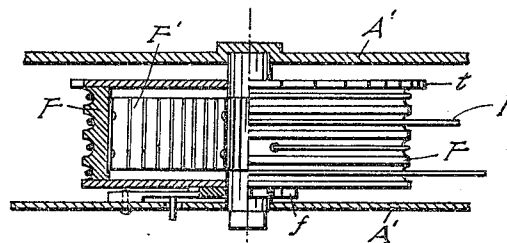


FIG. 13.

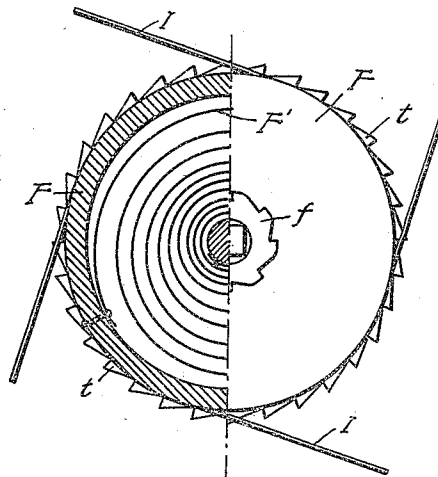


FIG. 12.

WITNESSES

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UNITED STATES PATENT OFFICE.

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AUTOMATIC SANITARY BREAD-SERVER.

1,064,503.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed November 30, 1912. Serial No. 734,328.

To all whom it may concern:

Be it known that we, ROBERT LEWIS and JOHN MILTON KINNAMAN, citizens of the United States of America, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Automatic Sanitary Bread-Servers, of which the following is a specification.

10 The object of our invention is to provide a device that will thoroughly protect a sliced loaf of bread from dust and flies, that will keep the bread fresh and protect the slices from being fingered or handled, the
15 top slice only being accessible and removable at each automatic lift of the cabinet cover, which, when closed, will prevent electric fans drying the bread.

We accomplish our object by the mechanism illustrated in the accompanying drawings in which—

Figure 1 is a transverse sectional view of the device looking to the rear showing an elevator plate lifting gear; Fig. 2 is a cross
25 section of the upper part of the device, showing the bread elevator plate therein, four tubular corners and pulleys therein for carrying cables; Fig. 3 is a bottom plan view of the device, parts of the same being
30 omitted; Fig. 4 is a side elevation of the device showing the cover of the cabinet partly open and the operating tube and inner small push button tube; Fig. 5 is a sectional side
35 view of said cover showing a hook operating lever and rod; Fig. 6 is a fragmentary sectional front view of the device shown in Fig. 5; Fig. 7 is a sectional elevation of the operating tube; Fig. 8 is an elevation
40 of said operating tube with the bread elevator plate operating rod and cover lifting rod; Fig. 9 is a cross section of said operating tube cut on line $x-x$ in Fig. 7; Fig. 10 is a cross section of said tube cut
45 on line $y-y$ in said Fig. 7; Fig. 11 is a detail view of said operating tube, broken away at top and bottom. Fig. 12 is a right half bottom view of a spring actuated drum and a left half sectional view of the same
50 showing the spring therein; Fig. 13 is a one half section and a one half elevation of Fig. 12, and Fig. 14 is a fragmental front elevation of the lower part of the device showing a drawer therein.

Similar letters refer to similar parts
55 throughout the several views.

A is the frame of the bread cabinet, A' the

base, B B— glass sides for the same and B' B'— are four tubular corners of the cabinet extending from the top thereof to feet $b b$ —. These feet are preferably supported on a revoluble plate C having a pivot b' seated in a supporting base C', the entire device being thereby rendered freely revoluble in any direction. For sanitary reasons the entire structure, except the sides, is preferably cast of metal but the structure being simply large enough to hold one loaf of bread it is easily moved on a table or lifted from one table to another.

D is a hinged lid over the bread cabinet which is raised and lowered automatically by means of the mechanism hereinafter described.

E is the bread elevator plate for supporting a loaf of bread E', previously sliced, as illustrated in Fig. 4, in which the lid and bread have simultaneously passed automatically into a raised position to give opportunity for a person to remove a slice before the lid descends to its normal position.

F is a spring actuated revoluble drum located in base A' of the device and F' is the spring therefor. As shown in Fig. 3 the bottom of the drum is provided with a spring retaining ratchet f and the periphery of the drum is provided with small teeth $t t$ which engage with a spring actuated hinged catch H. Said catch is operated by a crank lever H' which projects below the bottom of base A'. I I are bread elevator plate cables adapted to wind on said drum; said cables, as shown in Fig. 3, engage with pulleys I' I', one of which is located in the base of each of tubes B' B'—; said cables extending thence up through said tubes over pulleys I² I²— in the upper ends of said tubes and returning are permanently secured to elevator plate E.

d is a slidable closure withdrawable to permit of the removal of crumbs that may have sifted at the interior of the sides of the device from the bread elevator plate to the top of the base.

J is a tube attached rigidly by screws or other suitable means to the outside of the cabinet and within and on which tube the chief actuating mechanism of the device has connection. A section of inner smaller tube K, the top provided with push button K', operates inside the upper end of tube J. A push rod L extends through said small tube K and down to the lower end of tube J.

The bottom of said push rod is provided with a plunger k . Spaced from said plunger a second plunger k' is fastened rigidly on said rod L. A spiral spring M is seated on said plunger k' . K² is a collar integral with tube K at its lower end which bears down upon said spring when said inner tube and push rod are pressed down.

J' is a tubular by-pass for the flow of liquid passing upward or downward in the base of tube J to regulate the speed of rod L which is secured to plungers k and k' . Said regulation of the flow of liquid is done by means of adjusting screw J².

A short horizontal arm L' is securely fastened to rod L extending through a slot k^3 of inner tube K and also extending to the outside of tube J through vertical slot j .

N is a spring actuated hook pivotally attached to smaller tube K. The object of said hook is to engage with and raise horizontal arm L'. Said hook N is provided at the top with an off-set lug n for the purpose of releasing its engagement with arm L' when the lug n comes in contact with sleeve N'.

O is a lever secured pivotally at its lower end to arm L' for the purpose of raising and lowering cover D. Cover D is provided with hook D' operated and released from its catch simultaneously with the opening of the cover by spring actuated rods O' O''. Said rods O' O'' are connected to lever O as shown in Figs. 5 and 6.

P is a flat rod extending down and alongside of tube J; the bottom of said rod is seated on the lower extension of crank lever H'. Said rod P has a slot P' allowing room for the travel of rod L' in its downward movement. Said slot is continued at a right angle as shown in Fig. 8 for the purpose of locking the mechanism when rod P is pushed forward, thereby engaging the extension of slot P' with rod L'. Rod P is provided at the top with a folding handle Q for the purpose of grasping the locking mechanism.

Secured on the under side of elevator plate E there is a spring balance drum R. Cable R' of said drum is secured to the base A' for the purpose of taking up any lost motion which might occur.

After the spring actuated drum F has pulled elevator E to the highest position fresh bread is placed on the elevator and the bread and elevator are pushed down by hand until the elevator has reached its lowest position thereby winding spring F' in said drum said drum being held in place by teeth or cogs t t — and hinged catch H until released for the next operation. The function of ratchet f is to hold spring F' regulating the tension of drum F. The ratchet may be operated by an ordinary wrench. When drum F is held securely and there is no tension on cables I I, the spring actuated

drum R and cable R' hold the elevator plate E in taut position so as to prevent the elevator plate from becoming dislodged or binding at the corners.

The operation of the device is as follows: Press down push button K' in tube J. By this movement short horizontal rod L' is carried downward traveling in slot P' of rod P. When horizontal rod L' has reached the bottom of said slot it causes said rod P to be pushed downward thereby operating lever H'. A catch H is operated by lever H' releasing the spring actuated drum F. Cables I I— around said drum are connected to elevator plate E. When the spring actuated drum is released it causes elevator plate E to rise carrying the bread E' upward until it strikes cover D. The releasing of rod P locks drum F and elevator plate E. While push rod K is being pushed downward spiral spring M is being compressed. The spring actuated hook N on rod K engages with horizontal rod L'. The releasing of spring M raises lever O secured to short rod L'; the raising of lever O releases locking hook D' and also raises cover D in elevated position giving the operator a chance to remove bread from the cabinet. The spring M is now extended and rod L' is at its highest point being held by hook N. As the cover D is raised to its highest point the small lug n on hook N strikes the sleeve N' disengaging said hook from rod L' causing the cover to close. The liquid in the bottom of tube J' flowing from one chamber to the other by means of by-pass J' regulates the speed of the raising and lowering mechanism of the cover. When it is desired to hold cover D open the handle Q of rod P is pushed forward securely holding rod L' in a fixed position seated in a right angular slot at the upper end of rod P. If desired the bread elevator plate E may be raised independently by pressure downward by means of handle Q, leaving the hands free to re-fill the cabinet and releasing catch H from engagement with cogs t t —, thus relieving said cogs from wear. To lock the cover open, for the purpose of refilling, handle Q is pushed forward engaging rod L' in the short horizontal slot at the upper end of rod P, the same being done simultaneously with the downward movement of said rod P; the cover is thus held in fixed position.

We desire to reserve the right to make any alterations in the construction of any of the parts of our device which would be merely mechanical.

That which we claim and desire to secure by Letters Patent, is—

1. In an automatic sanitary bread server the combination of a supporting base, a plate pivotally revoluble on said supporting base, a cabinet having feet at the base thereof

supported on said revoluble plate, a slidable withdrawable closure above the cabinet base, a vertical tube at each corner of the cabinet, a tube for operating mechanism adjacent one
 5 of said corner tubes said tube having a vertical slot therein, the lower part of the tube forming a liquid chamber, a spring actuated revoluble drum at the base of the cabinet, a bread elevating plate within the cabinet,
 10 pulleys in the tops of the corner tubes, pulleys in the bottoms of said corner tubes and cables adapted to travel in said tubes engaging with said pulleys and said spring actuated drum, an inner small tube within said
 15 tube for the operating mechanism and a push button thereon, a rod inside said inner tube, a plunger on the bottom of said rod, a second plunger spaced above the other plunger and rigid on said rod, a spiral
 20 spring around said rod seated on said second plunger, a collar integral with the bottom of said inner small tube bearing upon the top of said spiral spring, a tubular by-pass adjacent the bottom of said operating mechanism tube and an adjusting screw to regulate
 25 the flow of liquid, a horizontal arm fastened to said rod extending through the slot in the inner tube and through the vertical slot in said operating tube, a sleeve, a spring actuated hook pivotally attached to said inner
 30 tube and a lug thereon to release the hook from engagement with said arm, a cover on said cabinet, a lever pivotally secured at its lower end to said arm for raising and lowering the cover, a hook within said cover and
 35 spring actuating rods connected with said lever, a flat rod provided with a slot having a right angle horizontal extension therein, the rod extended alongside the operating
 40 tube, a crank lever and a catch engaging a spring actuated drum located in the base of the device, a folding handle by which to grasp the locking mechanism, a spring balance drum on the under side of the elevator
 45 plate and a cable connected with the base of the cabinet to take up lost motion.

2. In an automatic sanitary bread server the combination with a bread cabinet hav-

ing a hinged cover with a lock and hook, the tubes at the corners thereof, a spring actuated revoluble drum in the base thereof, an
 50 elevator plate within said cabinet, upper and lower pulleys in said tubular corners, and cables having connection with said drum and carried on said pulleys, of a vertical
 55 tube for operating mechanism having a liquid chamber at the bottom and a slot in the side adjacent one of said corner tubes, a smaller tube within said adjacent tube and the push button thereon, a push rod in said
 60 smaller tube, a plunger on the bottom thereof, a second plunger spaced from said bottom plunger rigid on said push rod, a collar integral with the lower part of said small
 65 tube, and a spiral spring seated on said second plunger, a by-pass connected with said liquid chamber, a short horizontal rod and a lever connected therewith, a spring actuated hook with lug thereon adapted to
 70 engage with said short horizontal rod, the releasing of said spring actuated hook raising said lever, releasing the hook on said cover and lifting said cover to an open position.

3. A bread server comprising a cabinet, a
 75 hinged cover thereon provided with mechanism for raising and lowering the same automatically, a bread elevating plate in said cabinet, a spring actuated drum in the base
 80 of said cabinet, tubular corners on said cabinet, upper and lower pulleys therein, and the cables traveling thereon, said cables being connected to said spring actuated drum and elevator plate, an adjacent tube, a
 85 smaller inner tube and rod therein, and a push button thereon to operate the connecting mechanism raising and lowering said elevator plate, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

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JOHN MILTON KINNAMAN.

Witnesses:

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ORVILLE N. ADDISON.