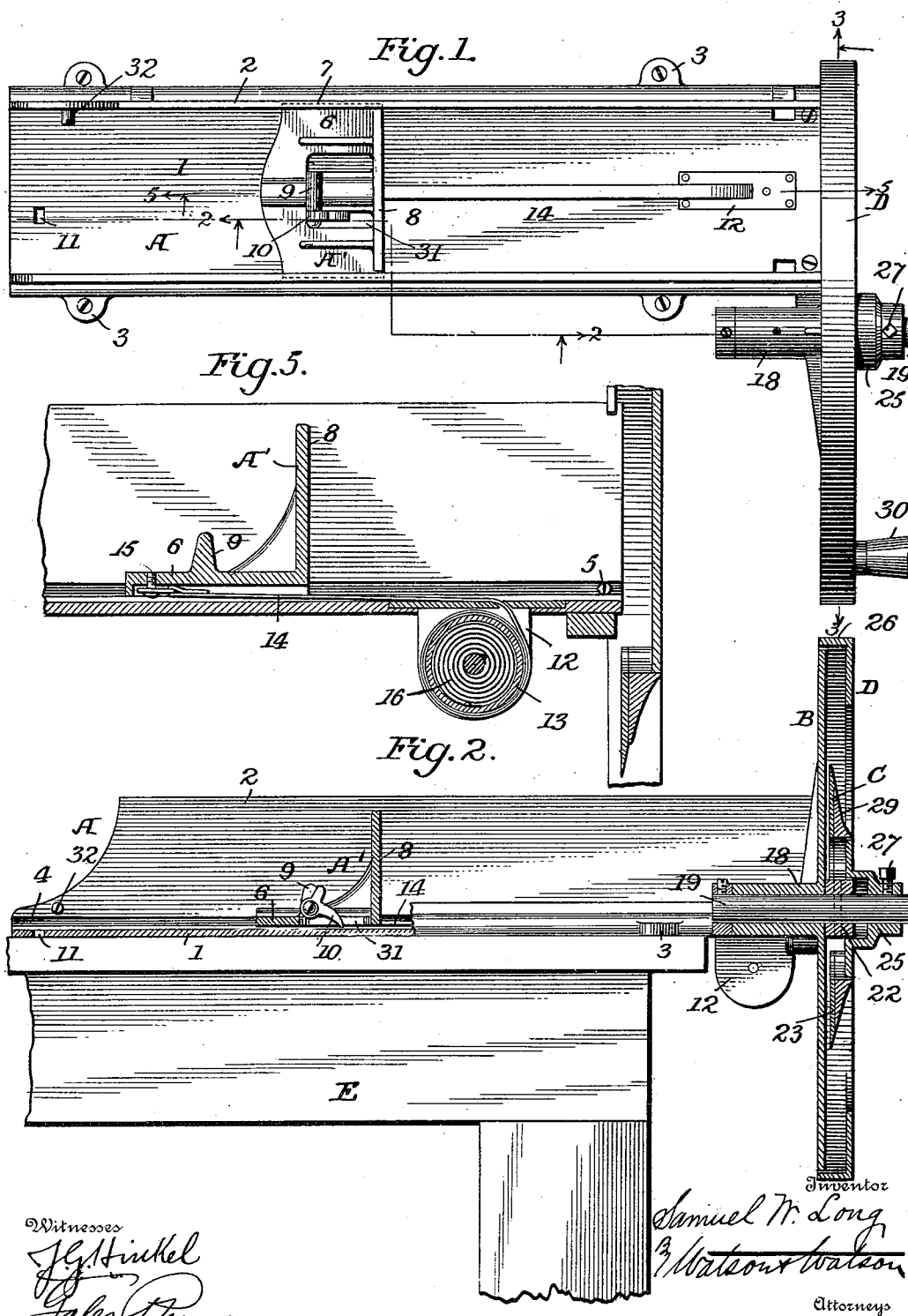


S. W. LONG.
BREAD CUTTER.

(Application filed May 15, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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No. 659,683.

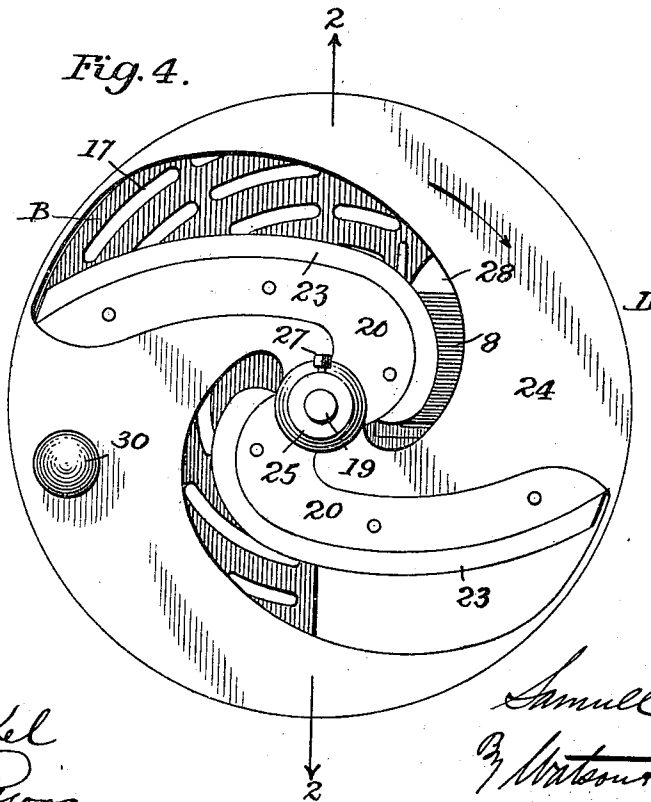
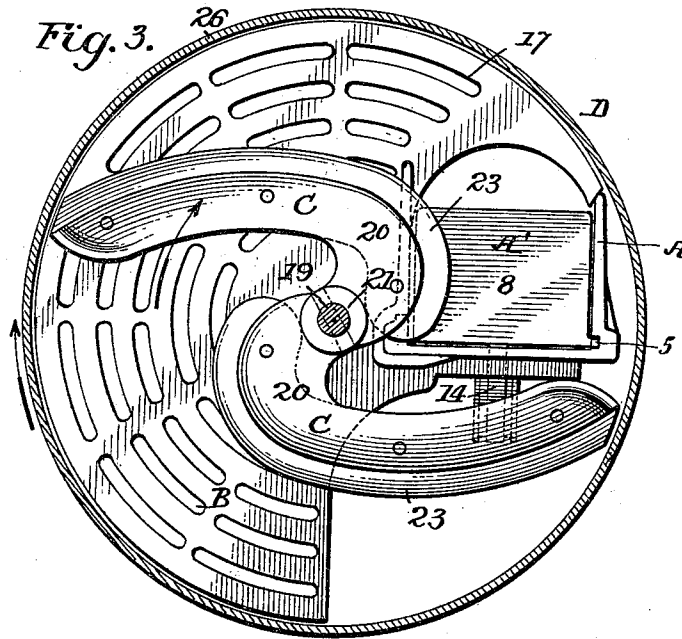
Patented Oct. 16, 1900.

S. W. LONG.
BREAD CUTTER.

(Application filed May 15, 1899.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

SAMUEL W. LONG, OF ROCHESTER, NEW YORK, ASSIGNOR TO ORRIN HOXIE AND CHARLES H. CLARK, OF SAME PLACE.

BREAD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 659,683, dated October 16, 1900.

Application filed May 15, 1899. Serial No. 716,934. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. LONG, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Bread-Cutters, of which the following is a specification.

My invention relates to slicing-machines, and more particularly to machines for slicing loaves of bread, although it will be obvious that it is not limited to use upon this particular article.

The objects of the invention are to provide a structure in which the bread is sliced with a clean shearing cut, the loaf is automatically fed to the knife or knives, the knives are guarded, the thickness of the slice can be regulated, in which the parts are arranged in a simple manner, whereby the machine is operated with a minimum amount of labor, and to improve generally upon devices of the nature indicated.

To these ends the invention consists in the various matters hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a top plan view of the machine. Fig. 2 is a sectional elevation on the lines 2 2 of Figs. 1 and 4. Fig. 3 is a front elevation with the gage-disk removed, the rim of said disk being shown in section. Fig. 4 is a front elevation with the gage-disk in place, and Fig. 5 is a fragmentary central sectional elevation.

Referring now more particularly to the drawings, A represents a trough or feed-table along which the loaf is fed; B, a guard-plate secured at the forward end of said trough; C, cutters journaled upon said guard-plate and operating across the open forward end of the trough to slice the loaf, and D a gage plate or disk which regulates the thickness of the slices.

The trough is suitably constructed of a base-plate 1 and side plates 2, said base-plate having pierced lugs 3 or other appropriate means for fastening the machine upon a support E. Near their lower edges the side plates are provided with longitudinal grooves 4, in the forward ends of which are pins 5, which serve as stops for the follower A'. This follower comprises a base-plate 6, with lateral

extensions 7, entering the grooves 4, and an upright 8 at its forward end adapted to bear against a loaf placed in the trough. A lug 9, extending upwardly from the base-plate in rear of the upright, serves as a finger-piece by which the follower can be moved by hand, and pivoted to this lug is a dog 10, adapted when the follower is in retracted position to drop through a slot 31 in the base-plate 6 into a notch or opening 11 in the base-plate 1, and thus positively hold the follower in such position.

In order that the follower may be automatically moved forward in the operation of the machine and the loaf thus fed to the cutter or cutters, there is located below the base-plate 1 a casing 12, in which is held a spring-actuated drum 13, a metallic ribbon 14 being secured to said drum in any well-known manner. The ribbon passes upwardly through the base-plate and is then secured to the follower, as by the screw 15. Of course the spring 16 within the drum is so wound that rearward movement of the follower serves to place said spring under greater tension, while in unwinding the spring turns the drum in the direction for winding the ribbon. A screw 32, projecting from one of the side plates, limits the backward movement of the follower.

Upon the trough at its forward end is secured the guard-plate B, here shown as perforated, these perforations 17 not only decreasing the weight of the plate, but also permitting free access of air to the space within which the knives rotate, whereby the knives are kept clean and bright, and upon this plate is formed a journal-box 18 for the shaft 19. The knife-arms 20 extend from a hub 21, which is suitably secured to the shaft, as by the pin 22, and the knives 23 are fastened upon the inner faces of the arms to rotate close up to the forward end of the trough. I have here shown two cutters; but it is manifest that the number can be varied at will without departing from the spirit of my invention. Preferably the knives have an involute cutting edge, whereby the loaf is cut with a long full shearing action.

To the outer side of the cutters is the gage-disk D, which comprises a face-plate 24, with a central hub 25 and a peripheral flange 26

extending backwardly and over the guard-plate B. A set-screw 27, passing through the hub, secures the disk to the shaft 19 and permits the same to be adjusted along said shaft, thus varying the distance between the cutters and the face-plate. Suitable openings 28 in the face-plate permit the passage of the slices of bread, and, as shown, the arms 20 have their outer faces 29 inclined outwardly from the knives in order to direct the slices through these openings. Preferably the openings are of such shape and size that the knife-arms rest against the edges of the face-plate, thus in a measure relieving the strain upon the pin 22. A handle 30 is provided upon the gage-disk for rotating the same.

Passing now to a consideration of the operation of the machine, it will be seen that, the gage-disk having been adjusted as desired, when a loaf of bread is placed in the trough in front of the follower said loaf is projected through the forward end of the trough until it meets the inner face of the gage-disk. Rotation of the disk causes rotation of the cutters, and as a knife moves across the end of the trough a slice is cut, the loaf being then fed forward ready for the action of the next knife, and so on. If it is desired to discontinue slicing for a short time, but to leave the uncut portion of the loaf in the trough, by retracting the follower and

locking it in this position by means of the dog 10 all pressure is removed from the loaf and its end is not kept jammed against the gage-plate.

In the present machine the parts are few and simple and are readily made and assembled, the cutters are guarded, the loaf is fed automatically, and a great number of slices are rapidly and evenly cut.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A bread-cutter comprising, in combination, a trough in which the loaf is guided, a follower operating in said trough, a bearing connected to the trough, a cutter-shaft rotating in said bearing, a hub fixed on said shaft, knife-supporting arms extending from said hub, knives connected to said arms, and a circular gage-plate adjustably connected to the outer end of said shaft, said gage-plate having openings through which the knife-supporting arms project, and being arranged to support said arms in the operation of cutting, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL W. LONG.

Witnesses:

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G. E. BENNETT.