No. 762,940. PATENTED JUNE 21, 1904.

C. E. POIGNANT.

BREAD CUTTING MACHINE.

APPLICATION FILED JULY 21, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

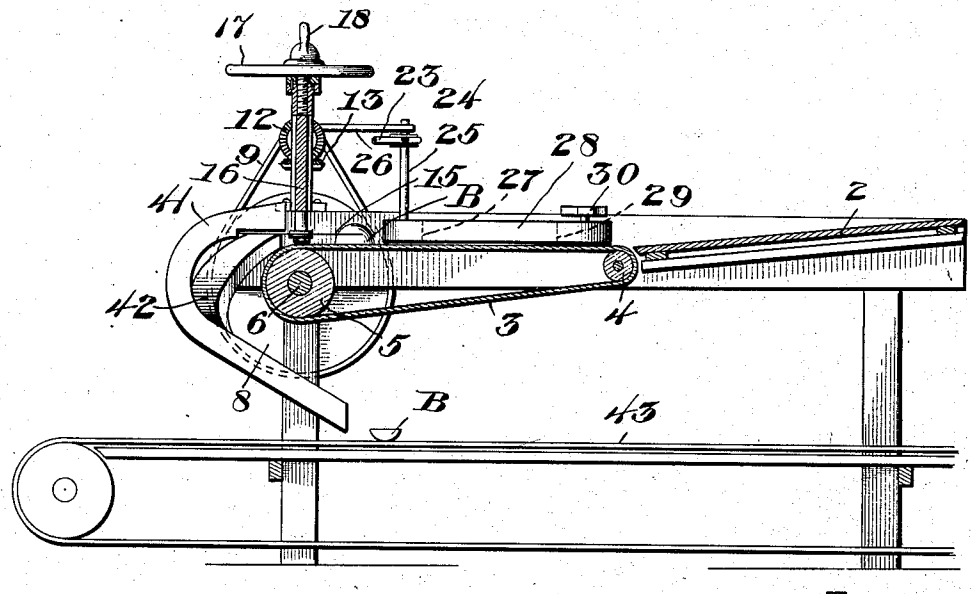


Fig. 2.

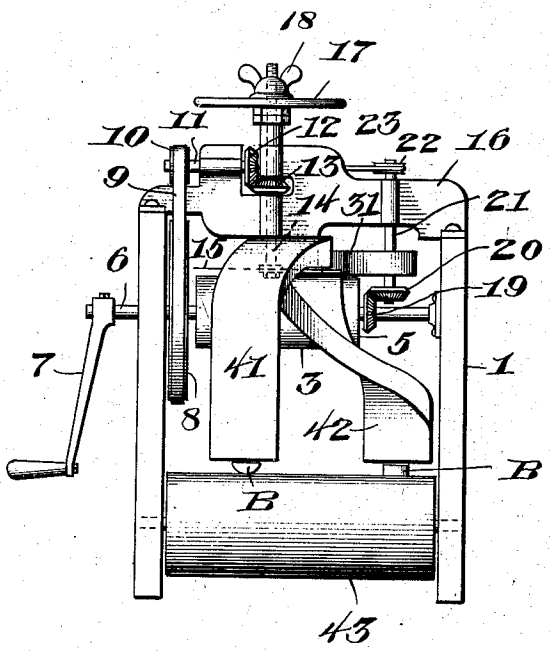
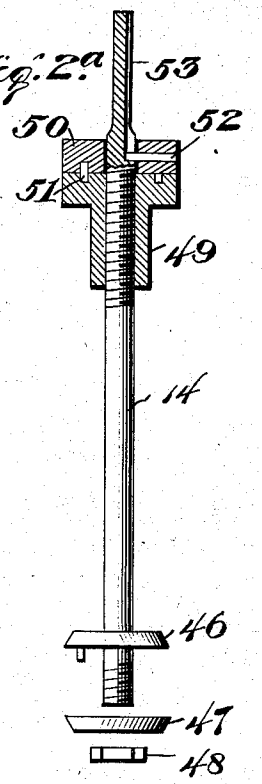


Fig. 2a.



Witnesses

J. L. Morehouse

John H. Howell.

Inventor

C. E. Poignant

by Walter F. Rogers.

Attorney.

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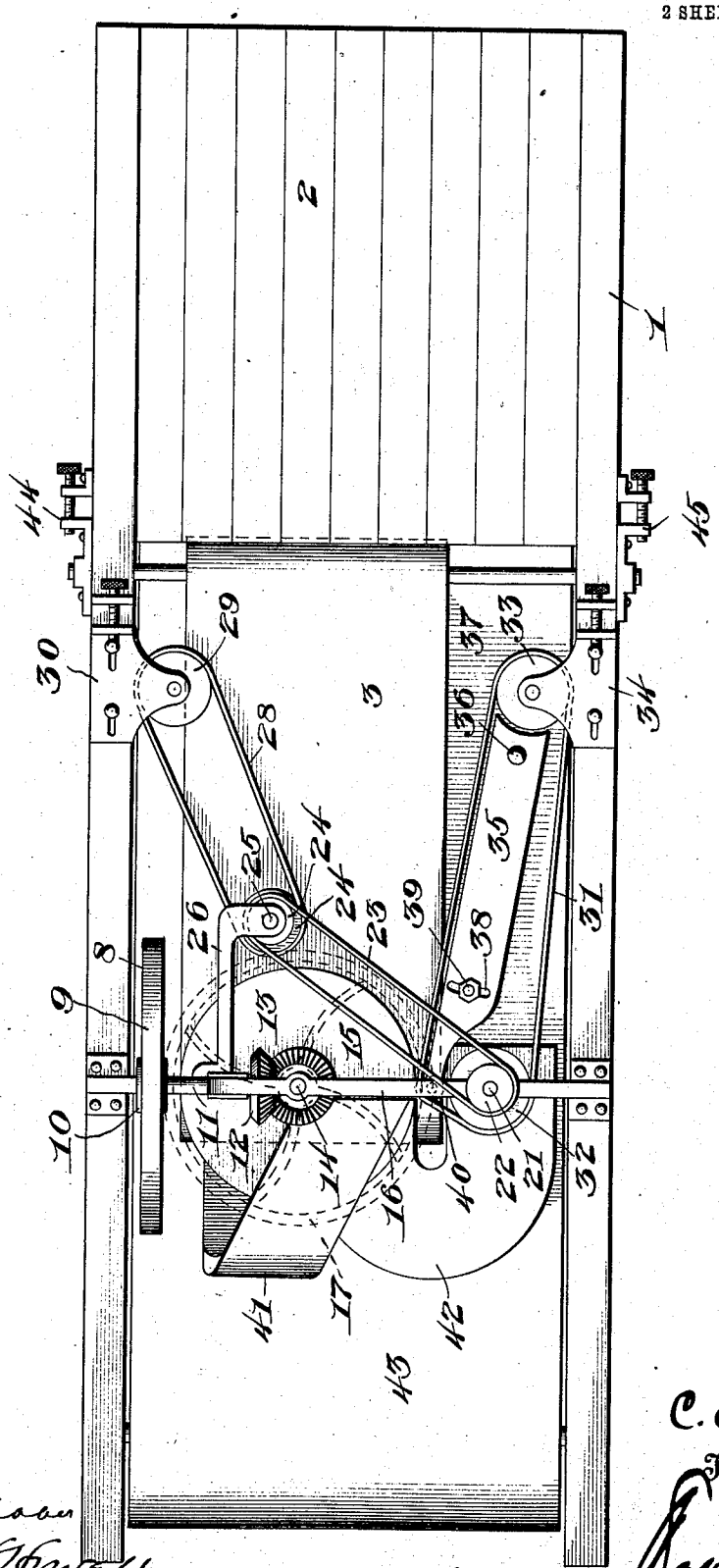
NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.



Witnesses
J. L. Mackaye
John A. Powell

C. E. Poignant
Inventor
by Walter F. Rogers
Attorney

No. 762,940. Patented June 21, 1904.

UNITED STATES PATENT OFFICE.

CARL EMIL POIGNANT, OF BIRCHLAKE, WISCONSIN.

BREAD-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 762,940, dated June 21, 1904.

Application filed July 21, 1903. Serial No. 166,444. (No model.)

To all whom it may concern:

Be it known that I, CARL EMIL POIGNANT, a citizen of the United States, residing at Birchlake, in the county of Bayfield and State of Wisconsin, have invented certain new and useful Improvements in Bread-Cutting Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to bread-cutters. Its object is to provide a machine which will be especially effective in dividing biscuits preparatory to toasting, and to this end comprises the improvements particularly set forth in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation partly in section. Fig. 2 is a rear elevation. Fig. 2ª is a detail of the knife-arbor and adjusting devices, and Fig. 3 is a plan view.

In the drawings, 1 represents the frame of the machine, and 2 a table down which the biscuits or other articles are fed to the main feed-apron 3, which turns over an idler 4 and is driven by a pulley 5, to which power is imparted by the shaft 6 and crank-handle or similar means 7. A pulley 8 on the shaft 6 drives, by means of a belt 9, a pulley 10, secured to a short shaft 11, on the end of which is a bevel gear-wheel 12, which drives a crown gear-wheel 13 on the arbor 14, which carries the circular knife 15. These shafts and others of the operating means are journaled in a bracket 16, attached to the frame of the machine and especially adapted for that purpose. The knife-arbor 14 extends above the bracket and bears at the top a balance-wheel 17, which may be removably secured by means of a set-screw 18, as shown in Figs. 1 and 2.

Secured to and revolving with the shaft 6 is a bevel gear-wheel 19, which drives a gear-wheel 20, and thereby a shaft 21, a pulley 22 at the top of the shaft, and through the belt 23 a pulley 24 on a shaft 25, secured and braced by means of a bracket 26. The shaft 25 bears at its lower end a pulley 27, which drives a belt 28, turning about an idler 29, journaled in an adjustable bracket 30. The belt 28 travels at a lower speed and in a direction opposite to that of the apron 3 and serves as a retarding and deflecting belt to prevent a too rapid feed and to insure the guidance of the biscuits toward the cutting-point. On the opposite side is a rapidly-traveling belt 31, driven by a pulley 32 on the shaft 21. This belt turns about an idler 33, journaled in an adjustable bracket 34, similar to the bracket 30. A swinging arm 35 is pivoted at 36 to a bed-board 37 and has a slot 38 and an adjusting-nut 39 near the end and on that end a friction-wheel 40, which may be made to bear with varying degrees of pressure upon the belt 31 by means of the adjustable arm 35. This belt travels in substantially the same plane as the knife and across one edge of the main feed apron or belt and across the plane of its travel and bears the biscuits or other articles in to the knife, and the adjusting-arm makes it operative with varying sizes of knives or in case the knife be worn down.

41 and 42 are spouts which respectively receive the upper and the lower parts of the divided biscuits, their receiving-mouths being on slightly-different planes and fitted together one over the other and being then bent out and then in, so that the divided biscuit or other article may be reversed before discharge, bringing the freshly-cut side uppermost, so that it may be more exposed.

43 is a conveyer-apron which leads into the toasting-oven or elsewhere, as may be desired. On the frame of the machine are adjusting-brackets 44 45, carrying the shaft of the idler 4, so that the feed-aprons may be adjusted at will. It will be understood that these and other details of my invention may be modified within the range of mechanical skill without departing from my invention as covered by the claims.

In Fig. 2ª I have shown a detail of devices which may be used to carry and regulate the position of the knife. 46 is a fixed collar with a dowel-pin, which may project into an appropriate hole in the knife. 47 is a collar and 48 is a jam-nut. As is obvious, the knife may be secured between the collars 46 and 47. The upper part of the arbor 14 is partially threaded and partially reduced and

squared. A sleeve 49 has an interior thread engaging the thread of the arbor 14. 50 is a collar with dowel-pin 51, which may take into an appropriate hole or cavity in the head of the sleeve 49. 52 is a pin or key which may pass into a slot or keyway 53 in the upper portion of the arbor 14. The collar or securing device 50 prevents an accidental turning of the sleeve 49. When the collar 50 is lifted, the sleeve 49 may be turned, and by engaging the top of the gear 13 its position will be so adjusted that it will either raise or lower the arbor 14, and thereby adjust the knife so that it may cut different thicknesses.

In operating my machine the biscuits or other articles are slid down by hand or otherwise to the conveyer or main feed-belt 3. As they move toward the knife 15 they are somewhat retarded, and so spread out and turned in toward the rotating knife by the belt 28. The auxiliary feed-belt 31 drives each biscuit or other article in toward the knife, which divides the biscuit—for example, throwing from the top of the knife the top of the biscuit and from below the bottom part of the biscuit, the top part driving into the mouth of the spout 41 and the lower part into the spout 42. As the parts pass down the bent spouts they are turned, and each comes out on the conveyer-belt in the direction of travel of the belt with the freshly-cut side uppermost, the parts passing thence into the toasting-oven or other receptacle.

Having fully described my invention, what I claim is—

1. In a cutting-machine, the combination with a horizontal knife and feeding mechanism, of curved spouts having their receiving ends in different horizontal planes above and below that of the knife and their discharging ends in substantially the same horizontal plane.

2. In a cutting-machine, the combination with a knife and feeding mechanism, of discharge-spouts to receive the divided parts, and bent toward the discharge-point so as to reverse the parts bringing the freshly-cut side uppermost.

3. In a cutting-machine, the combination with a rotary knife and feeding mechanism, of two spouts with their receiving ends one above the other, and bent outwardly and then inwardly.

4. In a cutting-machine, the combination of a rotary knife, a main feed-apron, a retarding and deflecting belt running in an opposite direction across the main feed-apron, and a supplemental feed-belt running with the main feed-apron and close to the knife.

5. In a cutting-machine, the combination of a rotary knife, a feed-apron, and an auxiliary feed-belt running in substantially the same plane as the knife and across one edge of the feed-apron and across the plane of its travel.

6. In a cutting-machine, the combination of a knife rotating in a horizontal plane, a feed-apron traveling beneath the knife, and a supplemental feed-belt traveling with comparative rapidity across one edge of the feed-apron.

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

CARL EMIL POIGNANT.

Witnesses:
JOSEPH ANDERSON,
KATIE HABELT.