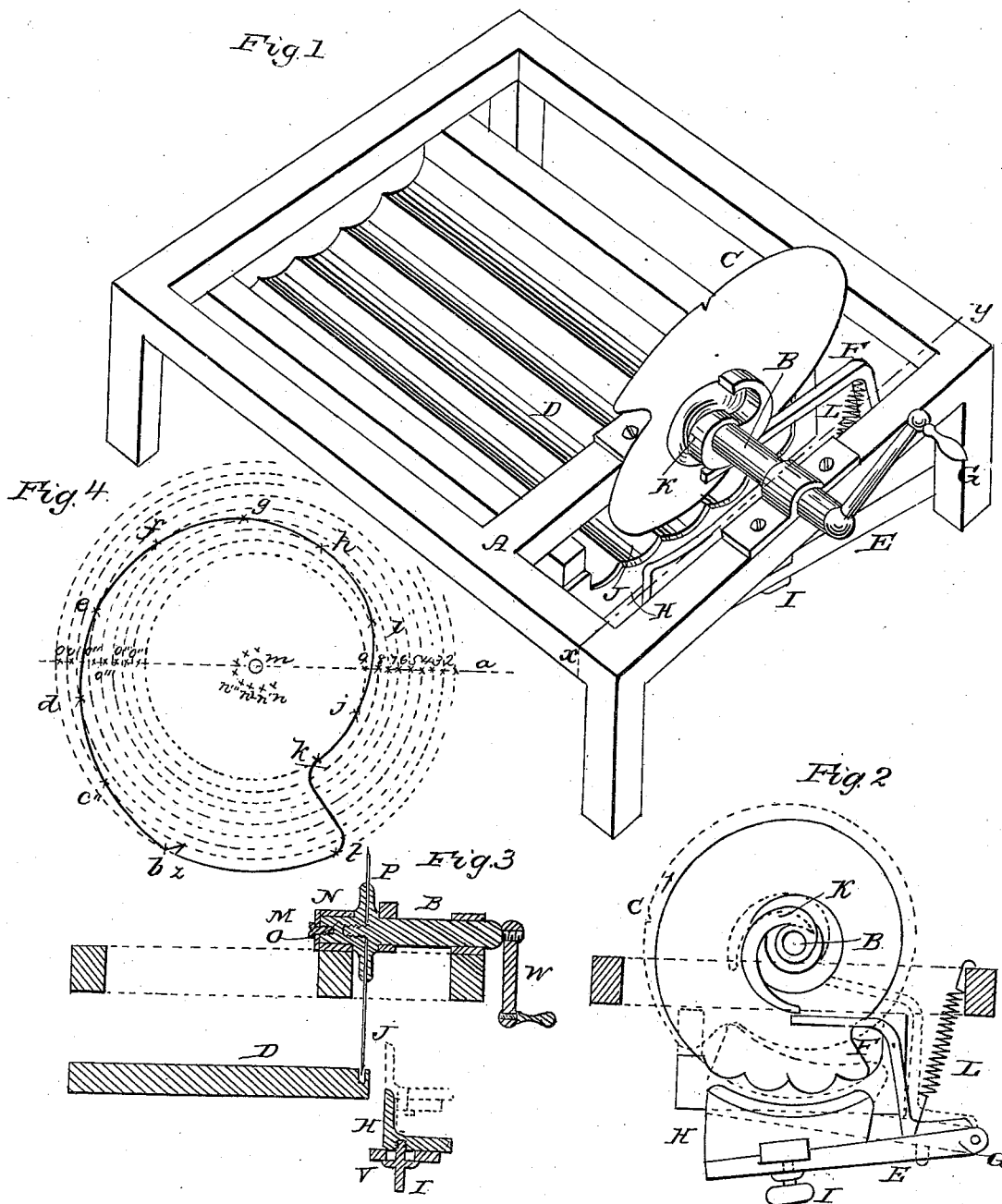


J. D. HALL.
Bread and Meat Slicer.

No. 46,350.

Patented Feb. 14, 1865.



Witnesses
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JOHN D. HALL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED BREAD AND MEAT SLICER.

Specification forming part of Letters Patent No. **46,350**, dated February 14, 1865.

To all whom it may concern:

Be it known that I, JOHN D. HALL, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and improved machine for slicing or cutting bread, meat, vegetables, and other soft substances; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a transverse section on the red line *x y*. Fig. 3 is a longitudinal section. Fig. 4 shows the method of drafting the cutter.

Corresponding parts in the different figures are indicated by the same letter.

The nature of my invention consists in constructing the rotary cutter of such shape or form as will produce the greatest possible length of cutting-edge, the same continually receding (in the manner of a geometrical spiral) from the center or axis at a uniform ratio; and in combining with the said cutter, or applying to any cutting or slicing machine adapted to the purposes herein specified, such an automatic feed-gage, (the same being also adjustable so as to enable the cutting of slices of any desirable thickness,) that when the operator places the article to be cut or sliced in a trough or box attached for the purpose, and slightly presses it toward or against the cutter, it moves forward against the feed-gage and under the cutter whenever the latter assumes a certain position in its revolution, the said feed-gage being held up in the proper position to act as a gage by means of a suitable spring, and being during each revolution of the cutter forced downward by means of a cam, or other suitable device, attached to the cutter-shaft, at the same time as the cutter's edge advances downward, thus keeping a little in advance of the latter, and hence leaving the slide free to fall upon a table, or in a box, or other receptacle prepared for the purpose.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The frame or support A, Fig. 1, I usually construct of cast-iron, and of any suitable and convenient form. The trough or feed-box D I also usually construct of cast-iron, with ver-

tical sides and a corrugated bottom, the same being generally somewhat concave, and near one end of the said bottom or corrugated surface I construct a narrow groove, J, down into which the most eccentric part, C, of the cutter passes during each revolution, whereby I obtain on both sides of the cutter a substantial support for the article to be cut. The object of corrugating the upper surface of this trough is to prevent the article that is being cut from sliding or twisting around sidewise in obedience to the drawing-face of the cutter, while at the same time it may move as freely toward the cutter as though it lay upon a plane surface.

The cutter-shaft, which may be conveniently made of either cast or wrought iron, I, in general, construct in two parts, B and O, as is clearly shown in Fig. 3. The screw and washer M (a simple shoulder or flange would serve the same purpose were the journal-box N made in two parts) prevent the shaft from moving endwise. The part B is screwed into the part O, as shown, and thus clamps the cutter C. The pin P, being fixed into the flange on the part B, fits a hole in the cutter, and thus secures the proper relative position of the cutter and the cam K. The cutter C may be conveniently constructed of sheet-steel, and of the form shown in Figs. 3 and 4. That side of the cutter which is next to the article that is being cut should be always a plane, all the grinding or sharpening being done on the opposite side, as shown in Fig. 3.

The cam K, I usually construct of cast-iron, its exterior form being drafted by the same rule as that of the cutter. It is attached to the shaft B in such a relative position to the cutter as to permit the feed-gage to spring upward, as shown by the dotted lines, Figs. 2 and 3, as soon as a slice is completely severed.

The feed-gage, consisting of the parts E, F, and H, and the set-screw I, turns on a pin, G, and is held up against the can K by means of any suitable spring, L. The piece E may be made of wood or sheet-iron, and the piece F may be made of wrought-iron, or the two may be cast in one of iron. The piece H may be made of wood, or sheet, wrought, or cast iron, and the set-screw I may be made of either common cast or malleable iron. Through the means of the slot V and the thumb screw I

the piece H may be set at any desired distance from the cutter, thus gaging the thickness of the slices to suit the fancy of the operator. This adjustable automatic feed-gage may also be applied to any reciprocating as well as rotary slicing or cutting machine by simply attaching to the face of the knife a small projection parallel to the edge thereof in such a manner that as the knife advances downward the said projection will continually press upon the piece F, and thus force the gage downward a little in advance of the edge of the knife.

To operate this machine, it is only necessary for the operator to place the article to be cut or sliced in the trough D, and with one hand continually press the same lightly against or toward the cutter, and with the other hand revolve the latter, by means of the crank W, in the direction indicated by the arrow-head, Fig. 2. As soon as the cutter revolves to the position shown by the dotted line, Fig. 2, the article to be cut moves forward against the feed-gage, and is then in the proper position for a slice to be cut off while the cutter is completing the revolution, the feed-gage being at the same time pressed downward by the cam

K a little in advance of the cutter's edge, so as to allow the slice to lean over in obedience to the wedging pressure of the cutter, and finally fall down as soon as it is cut entirely off, at which instant the cam passes off from the piece F, and thus allows the feed-gage to spring up into the position shown by the dotted lines. These operations are repeated and a slice is cut off during each revolution.

This machine may be driven by means of steam or other power by simply placing a suitable pulley upon the shaft B.

When it is desired to grind or sharpen the cutter, it may be removed by simply unscrewing the two parts of the shaft.

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

The combination of the rotary cutter C with the cam K and feed-gage H, for the purposes specified, and, in combination with the above, corrugating the interior surface of the trough D, for the purpose set forth.

JOHN D. HALL.

Witnesses:

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