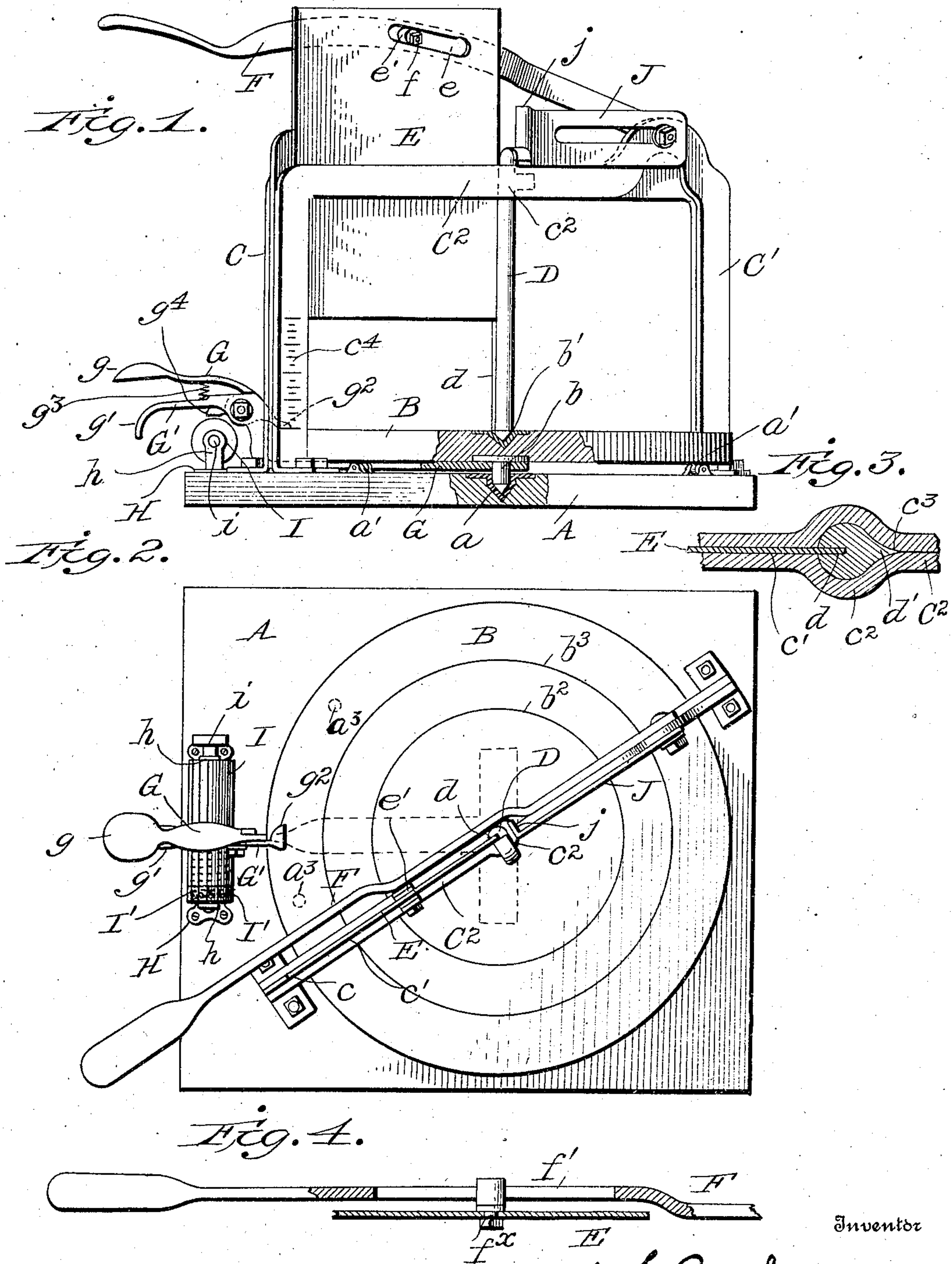


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D. J. BUSHORR.
CHEESE CUTTER.

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UNITED STATES PATENT OFFICE.

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CHEESE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 785,348, dated March 21, 1905.

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To all whom it may concern:

Be it known that I, DORRICK JOSEPH BUSHORR, a citizen of the United States, residing at Galena, in the county of Cherokee and State of Kansas, have invented certain new and useful Improvements in Cheese-Cutters, of which the following is a full and complete specification.

My invention relates to that class of cheese-cutters in which the cheese is supported upon a rotatable table or block and adapted to be turned by suitable devices to an extent corresponding with a shiftable scale indicating the desired weight to be severed by a vertically-moving slicing-blade arranged radially with relation to the rotatable cheese-block.

One object of the invention is to produce a cheese-cutter of this class adapted to slice the cheese from either side of the cut, thus keeping both sides of the cut fresh.

A further object of the invention is to produce a cheese-cutter adapted to cut an accurate measured slice but partly through the height of the cheese.

With these and other objects in view the invention consists in the novel features and combinations to be hereinafter described in detail, and claimed in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is an elevation of a cheese-cutter embodying my improvement. Fig. 2 is a top plan view thereof. Fig. 3 is an enlarged detail view showing in section the top frame and inner knife-guide or center rod. Fig. 4 is a view showing a modified form of connection between the blade and the operating-lever.

A suitable stand, counter, or base A is provided with a vertical socket *a* and at points radially equidistant from the socket with friction-rolls *a'* to support the outer edges of the cheese-block B. This cheese-block is preferably circular in form and provided centrally on its under side with a stout stud *b*, adapted to fit the socket *a* of the base so snugly as to prevent wobbling, but so freely as to permit of the easy rotation of the cheese-block in either direction. The cheese-block is provided on its upper side, at its radial cen-

ter, with a conical socket *b'*, which is in the same vertical plane as the stud *b* on its under side. I prefer to score the upper side of said cheese-block with concentric circles *b²b³*, struck from the socket *b'* as a center and corresponding in diameters with the diameters of standard cheese-molds, so that a cheese may be quickly positioned on the block with its radial or axial center in a vertical plane with the conical socket *b'*.

Rigidly secured to the base A, close to the edges of the cheese-block B and at diametrically opposite points with respect thereto, are standards C C', shown herein as connected at the top by a bridge C². The inner face of the standard C is provided with a groove *c*, and the bridge C² is provided with a slot *c'*, extending from the groove *c* to the center of the bridge, where it terminates in a tubular boss *c²*, which is accurately aligned in a vertical plane with the conical socket *b'* and stud *b* of the cheese-block. This tubular boss *c²* is accurately reamed or dressed interiorly to constitute a guide for a slender center rod D, which is designed to be thrust through the axial center of a cheese centered on the cheese-block, the lower end of said center rod being dressed to a cone shape to more readily pass through the cheese and to fit the cone socket *b'* of said block. The rod is provided at one side with a longitudinal groove *d*, corresponding to the groove *c* of the standard C, and is also provided with a steady-lug *d'*, which is designed to fit snugly a recess *c³* in the bore of the tubular boss *c²*, thus locking the center rod against rotation and maintaining its groove *d* in position directly facing the groove *c* of standard C, the two grooves *c* and *d* thus constituting a guide or way for the slicing-knife E. The knife E consists of a thin blade of steel sharpened at its bottom edge and of a width a little greater than the radius of the cheese-block B, its truly parallel edges being seated in and guided by the grooves *c* and *d* of the standard C and center rod D, as before stated. The blade is seated in and guided by the slot *c'* of the bridge C², its upper edge being provided with a slot *e* to receive a steel antifriction-roll *e'*, which is journaled on a

stud f , projecting from an operating-lever F, which is pivoted at a suitable point on the bridge C^2 , connecting the standards C and C'.

To rotate the cheese-block in either direction, I have provided a gripping device comprising the following parts: A lever G is pivoted at its inner end on the stud b of the cheese-block, the outer end of said lever being bent upward at a point beyond the periphery of the cheese-block and terminating in a handle or grip g . To the upwardly-extending part of said lever is pivoted a short lever G', its outer end having the form of a handle g' and being located beneath the handle g of lever G. The inner end of the short lever G' terminates in a flat foot g^2 , which extends over the edge of the cheese-block B, the purpose of this construction being to afford convenient means for rotating the cheese-block, it being apparent that upon grasping and pressing together the two handles g and g' the edge of the cheese-block will be firmly clamped between the lever G, underlying said block, and the foot g^2 of the short lever, so that the cheese-block may be rotated in either direction. I prefer to employ a spring g^3 to normally hold the parts of this gripping device apart, so that it may be moved in either direction without rotating the cheese-block; but this is not essential, as the handle g' of the short lever G' may be so proportioned in weight to the other end that the foot g^2 will normally be raised free from contact with the upper surface of the cheese-block.

To measure the amount or weight of cheese to be cut, I have arranged adjacent to the cheese-block and in the path of the gripping device a scale which may be numbered according to the needs of the trade to insure cuts of ounces, fractions of pounds, and pounds, &c. This scale comprises a base H, secured to the stand, counter, or base A and provided at its ends with standards h , having apertures in the upper ends, in which is journaled the shaft i of a revoluble cylinder I, the peripheral surface of which is divided by longitudinal lines into a number of spaces. At one end of the cylinder is a circumferential line intersecting the longitudinal lines and making index-spaces I' to receive numbers indicating weights of different cheeses. The longitudinal spaces are marked at an accurately-determined point to indicate each a unit of the total weight of the cheese, or one pound, and said longitudinal space is subdivided into one-sixteenths, representing an ounce. In the drawings the character "16" of the index I' is uppermost on the cylinder, indicating that a sixteen-pound cheese is to be cut. The characters of the longitudinal spaces will be distanced apart to suit the weight of each cheese, the spacing for an eight-pound cheese being twice the distance apart required for a sixteen-pound cheese.

In operation we will suppose that a sixteen-pound cheese has been centered on the cheese-block B and secured in position by passing the center rod D down through it. The knife E is now forced down, making a radial cut through the cheese from the center to its periphery. The cylinder I is now turned to bring the longitudinal space of the cylinder bearing the index character "16" uppermost and in the path of the pointer g^4 of the gripping device, which latter will now be moved to a point on the cylinder desired—say until the pointer is opposite the half-pound division of the cylinder. The handles of the gripping device should now be pressed together, thus grasping the cheese-block, the knife raised free from the cheese, and the gripping device moved with the cheese-block until arrested by a stop a^3 , secured to the stand or counter A in fixed relation to the knife. The knife being now forced down, a slice one-half pound in weight will be severed from the cheese.

The standards C and C' are of sufficient height to admit of the reception beneath the slicing-knife E in its most elevated position of a cheese having the greatest standard thickness, and the standard C is provided with a scale c^4 or other designation to indicate the minimum standard of thickness of a cheese—say four inches.

In use with cheese of the minimum standard thickness the operation of the device will be apparent. A cheese being centered on the cheese-block B, the knife is forced down by the lever F, raised, the cheese-block rotated a sufficient distance, and the knife again forced down by the lever. In cutting the thicker cheese, however, a cut entirely through the cheese to take off, say, one-quarter pound would make a slice so thin as to be objectionable to both customer and merchant. To overcome this difficulty, I have provided a stop J for the lever F, so that the descent of the knife may be arrested at any predetermined point—say one-half the thickness of the cheese. This stop J may be of various forms and variously arranged, a simple and inexpensive form being shown in the drawings, consisting of a straight slotted body having one end turned at an angle, as shown at j . The body of the stop J is arranged parallel with the bridge C^2 , connecting the standards C and C', the bolt connecting the lever F with the bridge passing through the slot of the stop, as shown, and the angular end j lying normally adjacent to the boss c^2 of the bridge in a position not to contact with the offset or bend of the lever where it passes the boss. Should the device be designed to cut ordinarily from a cheese of four inches thickness and it is desired to cut from one of, say, eight inches thickness, the stop J is moved outward from the boss to such position that

its angular end will arrest the descent of the knife when it has cut half through the thickness of the cheese, so that the scale I, adapted for cheeses weighing from eight to twenty pounds, can be used as well with cheeses weighing from sixteen to forty pounds. In order to accurately set the stop J to arrest the lever and knife at a determined point, I have provided a scale c^4 , which is attached to the standard C and from which, taking the cutting edge of the knife as a guide in conjunction with said scale, the stop may be set to arrest the downward movement of the knife at any determined point.

In Fig. 4 I have shown a modified arrangement for connecting the slicing-blade with its operating-lever, wherein is shown a stud f^x , clamped to the blade and carrying a friction-roll seated and adapted to traverse a slot f' formed in said operating-lever F.

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

1. In a cheese-cutter, the combination with a stand or counter, of an imperforate cheese-block centrally stepped or pivoted to rotate thereon and provided on its upper side with a socket in a vertical plane with its step or pivot, standards secured to the counter, one of which is provided with a guide-groove, a grooved center rod seated at its lower end in the socket of the cheese-block and supported at its upper end laterally and against rotation by connections from the standards, a knife the vertical edges of which move in the guide-grooves of the standard and center rod, a lever fulcrumed on the standards and connected with the upper edge of the knife, a gripping device normally free from the cheese-block but adapted to grasp the same and move it in

either direction on its step or pivot, a measuring-scale secured to the counter in the path of the gripping device, and an adjustable stop between the lever and standards to arrest the movement of the lever and knife, substantially as described.

2. In a cheese-cutter, the combination with a stand or counter, of an imperforate cheese-block centrally stepped or pivoted to rotate thereon and provided on its upper side with a socket in a vertical plane with its step or pivot, standards secured to the counter, one of which is provided with a guide-groove, a grooved center rod seated at its lower end in the socket of the cheese-block and supported at its upper end laterally and against rotation by connections from the standards, a knife the vertical edges of which move in the guide-grooves of the standard and center rod, a lever fulcrumed on the standards and connected with the upper edge of the knife, a gripping device normally free from the cheese-block, but adapted to grasp the same and move it in either direction on its step or pivot, a measuring-scale secured to the counter in the path of the gripping device, an adjustable stop adapted to be interposed between the lever and standards to arrest the movement of the lever and knife and a scale on the standard adjacent to the path of the knife-blade whereby the stop may be accurately adjusted to arrest the knife at a determined point, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DORRICK JOSEPH BUSHORR.

Witnesses:

A. J. KINSLEY,
J. M. THIXTER.