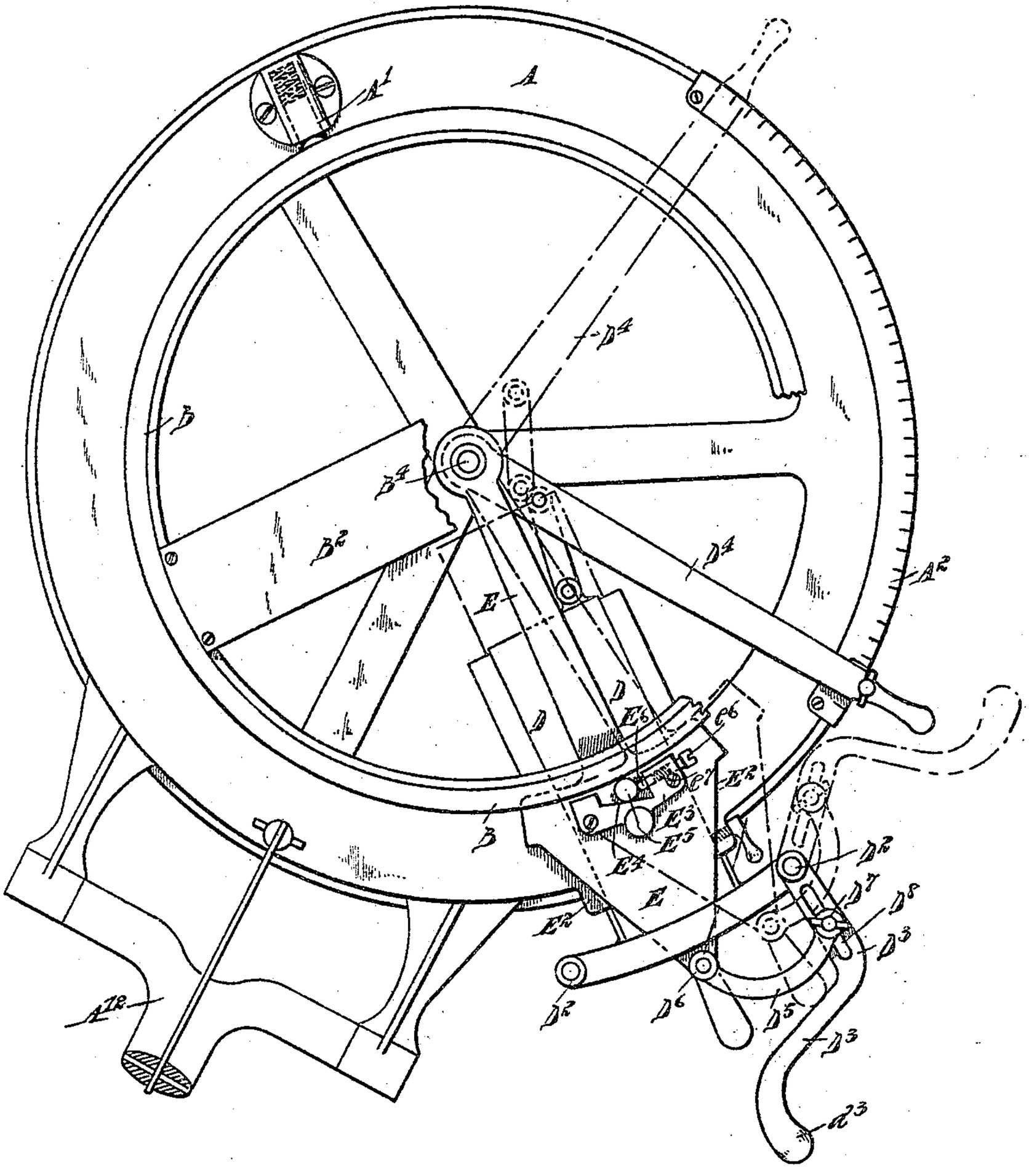
No. 816,462. PATENTED MAR. 27, 1906.

J. HALLIDAY.

CHEESE CUTTER.

APPLICATION FILED FEB. 6, 1904.



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JOHN HALLIDAY, OF DETROIT, MICHIGAN.

CHEESE-CUTTER.

No. 816,462. Specification of Letters Patent. Patented March 27, 1906.

Application filed February 5, 1904. Serial No. 192,213.

To all whom it may concern:

Be it known that I, JOHN HALLIDAY, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Cheese-Cutters; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to cheese-cutters of that kind in which the cheese is placed upon a rotating table to be cut by a radially-reciprocating knife, the cheese being moved a certain angular distance to correspond with the quantity of cheese it is desired to cut off.

I have shown my improvements embodied in a cheese-cutter of the kind described in my application filed November 21, 1903, Serial No. 182,161, though it will be understood that it is applicable to any cutter of the general class above specified.

In the drawing the figure is a plan view showing my improvements and so much of a cheese-cutter as is necessary to illustrate the connection of said improvements therewith.

A is the base of a cheese-cutter. A^{12} is the radially-reciprocating knife attached to said base. B is an annulus having a cross-piece B^2, which serves to pivot the annulus upon the pin B^4 at the center of the base A. The annulus B serves to carry the platen upon which the cheese is placed, which platen is omitted in the drawing for the sake of clearness.

A′ is a frictional device secured to the base A, carrying a presser-foot, which is forced with a resilient pressure against the periphery of the annulus B.

The periphery of the annulus B is smooth, the usual ratchet-teeth being omitted as unnecessary when the device is used with my improvements hereinafter to be described.

E is an oscillating lever-arm pivoted at B^4 and having at its outer end the diverging cam-surfaces E^2 E^2. D is a radially-reciprocating slide supported in ways upon the frame A and provided at its outer end with stops D^2 D^2, against which the cam-surfaces E^2 E^2 strike to limit the travel of the lever-arm E.

D^4 is an arm pivoted at B^4 and adapted to travel over the scale A^2 to adjust the radial position of the slide D, thus adjusting the travel of the lever-arm E according to the position of the stops D^2 D^2.

E^3 is a clutch-shoe secured upon the lever-arm E and provided with the inclined surfaces E^4.

E^5 is a roller bearing against the periphery of the ring B and against the inclined surfaces E^4 upon the shoe E^3.

E^6 is a pin pressing against the roller E^5 because of the action of the spring e^7 to hold said roller in contact with the ring B and surface E^4. e^6 is a screw for adjusting the pressure of the spring e^7.

Upon one of the stops D^2 is pivoted a lever-arm D^3, having a longitudinal slot D^8 therein.

D^5 is a curved link pivoted at D^6 to the lever-arm E and at the other end pivoted to the sliding block D^7, which block is adapted to be adjusted to different positions in said slot and secured in any predetermined position by a thumb-screw in the usual way. The outer end of the lever D^3 is formed into a handle d^3.

To oscillate the lever E, the lever-arm D^3 is turned about its pivot upon the stop D^2. When the lever-arm D^3 is at one extremity of its travel, a cam-surface E^2 is against one of the stops D^2. When said lever-arm is at the other extremity of its travel, the other of said cam-surfaces is against the other of said stops. When the lever-arm D^3 is at that extremity of its travel which corresponds to the end of the actuating stroke of the lever-arm E, the pivots D^6 and D^7 are approximately in line with the pivot of the lever-arm D^3, so that the apparatus is nearly on a dead-center and little or no movement of the lever-arm E corresponds to the movement of the lever-arm D^3. The block D^7 is adjustable along the slot D^8, so that it may be adjusted to the proper distance from the pivot of the lever-arm D^3 so that the travel of said lever-arm shall correspond to that of the lever-arm E, as above described.

In devices of this kind there is considerable inertia to the cheese and parts supporting it, so that if the actuating device is moved quickly and stopped suddenly the cheese is apt to be carried beyond the distance intended, thus making the cut irregular. For this reason it has been impracticable to use frictional clutches. In the above-described device the cheese-actuating lever E is brought slowly to rest at or near to the dead-center of the link D^5 and lever D^3, so that the inertia does not carry it beyond its intended point of

travel, and I am therefore able to use a frictional clutch and also to avoid irregular cuts where a rack and pawl are used.

What I claim is—

1. The combination of a cheese-carrier, a device adapted to be manipulated, means for connecting a point on the carrier with a point on the manipulated device, and means for constraining the motion of the manipulated device so that it shall move at an increasing angle to the portion of the carrier with which it is directly connected and thereby decrease the rate of movement of the carrier toward the end of travel of the manipulated device, for the purpose described.

2. In a cheese-cutter, the combination of a rotary cheese-supporting device, a frictional clutch coacting with the cheese-supporting device adapted to actuate said supporting device during its stroke in one direction and to move independently thereof during its stroke in the other direction, a pivoted lever-arm adapted to actuate said frictional clutch, and means for connecting said lever-arm to said clutch, said lever-arm being arranged to finish its stroke at or near its dead-center.

3. In a cheese-cutter, the combination of a rotary cheese-supporting device, a reciprocating part adapted to actuate the cheese-carrying device during its stroke in one direction, and to move independent thereof during its stroke in the other direction, a pivoted lever-arm adapted to actuate said actuating device, and means for connecting said lever-arm to said actuating device adjustably toward and away from the pivot of said lever-arm.

4. In a cheese-cutter, the combination of a rotary cheese-supporting device, a reciprocating part adapted to actuate the cheese-carrying device during its stroke in one direction, and to move independent thereof during its stroke in the other direction, a pivoted lever-arm adapted to actuate said actuating device, and means for connecting said lever-arm to said actuating device, said lever-arm being arranged to finish its stroke at or near its dead-center.

5. In a cheese-cutter, the combination of a base, a revoluble carrier, and mechanism for revolving said carrier comprising an arm and a pivoted element so arranged as to move said arm at constantly-decreasing speed relative to the rate of movement of said pivoted element, whereby the movement of said carrier ends before the end of the movement of said pivoted element.

6. In a cheese-cutter, the combination of a base, a revoluble carrier, and mechanism for revolving said carrier comprising an arm and a pivoted element so arranged as to move the arm near the completion of its stroke at a constantly-decreasing speed relative to the rate of movement of said pivoted element, whereby the movement of said carrier ends before the end of the movement of said pivoted element.

7. In a cheese-cutter, the combination of a base, a revoluble carrier, mechanism for revolving said carrier, and a pivoted element so arranged as to move said carrier-revolving mechanism at a constantly-decreasing speed relative to the rate of movement of said pivoted element, whereby the movement of said carrier ends before the end of the movement of the pivoted element.

8. In a cheese-cutter, the combination of a base, a revoluble table, a lever for moving said table a predetermined distance, and connections between the lever and table whereby the movement of the table ceases before the movement of the lever ceases.

9. In a cheese-cutter, the combination of a base, a revoluble table, a handle for moving said table a predetermined distance, and connections between the handle and table whereby the movement of the table gradually ceases with a constant rate of movement of the handle.

10. In a cheese-cutter, the combination of a base, a revoluble table, a handle for moving said table a predetermined distance, and connections between the handle and table whereby the movement of the table gradually ceases before the handle reaches the limit of its throw.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN HALLIDAY.

Witnesses:

MAY E. KOTT,

ELLIOTT J. STODDARD.