

I. E. LEE.
CHEESE CUTTER.
APPLICATION FILED JULY 5, 1912.

1,060,771.

Patented May 6, 1913.

3 SHEETS—SHEET 1.

Fig. 1.

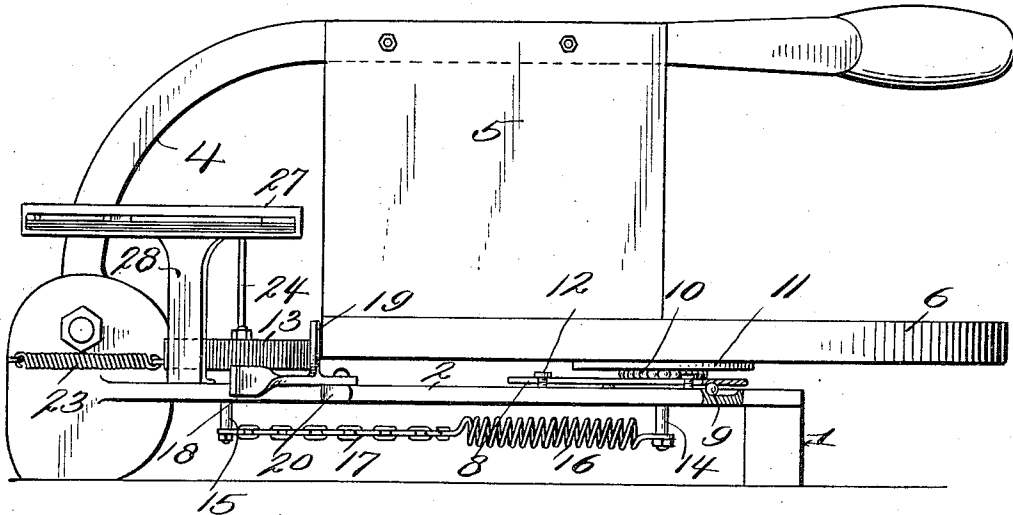
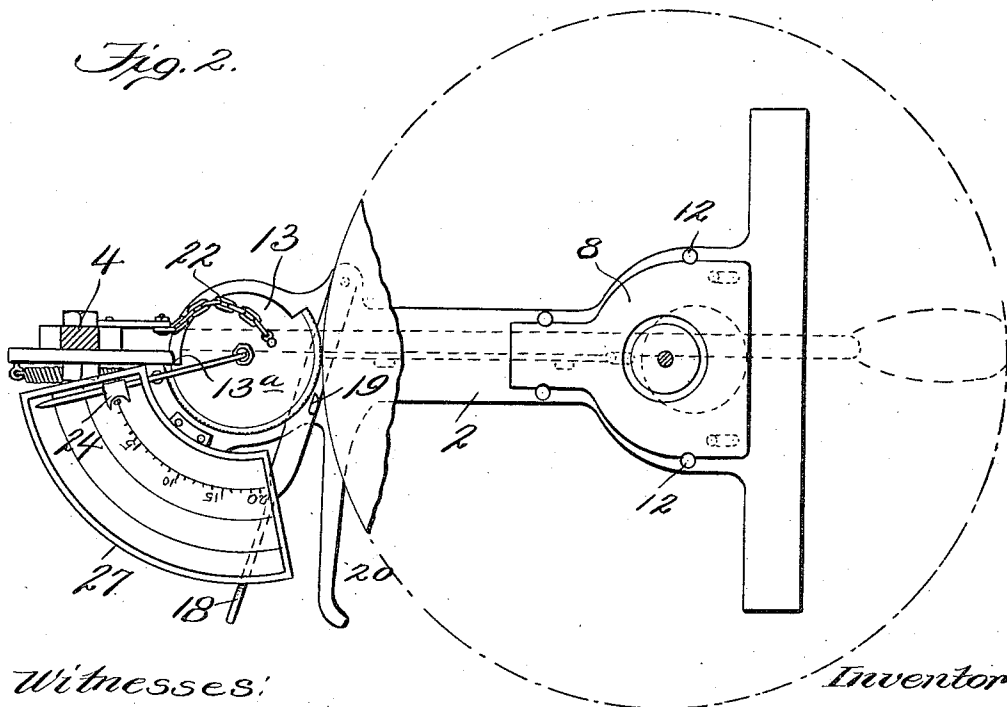


Fig. 2.



Witnesses:
Ed. Hester
John Powers.

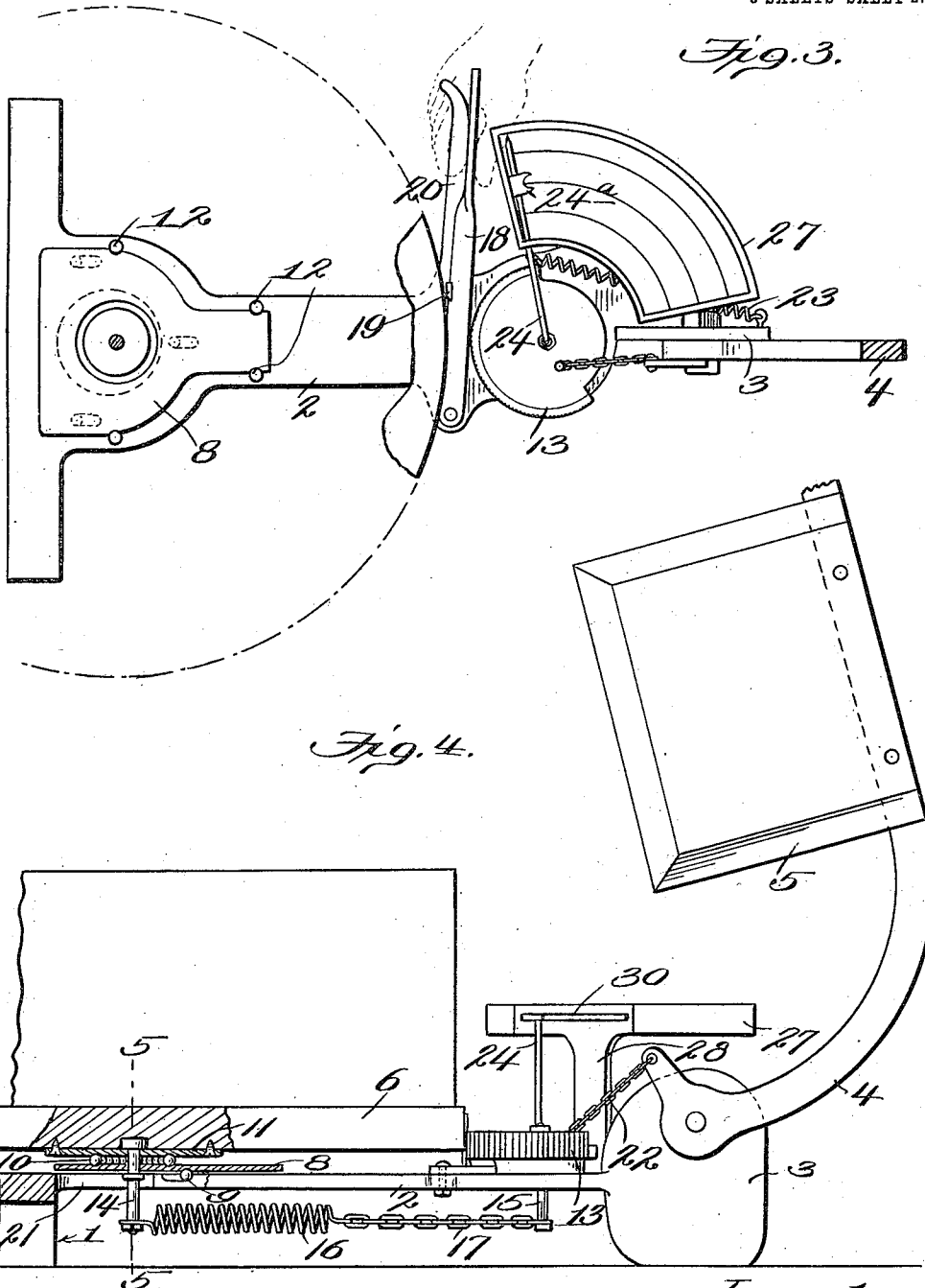
Inventor
Isaac E. Lee
by James L. Norris, Atty.

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3 SHEETS—SHEET 2.



Witnesses:
C. H. Keeler
John S. Brown.

Inventor
Isaac E. Lee
by James L. Norris, Atty.

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3 SHEETS—SHEET 3.

Fig. 5.

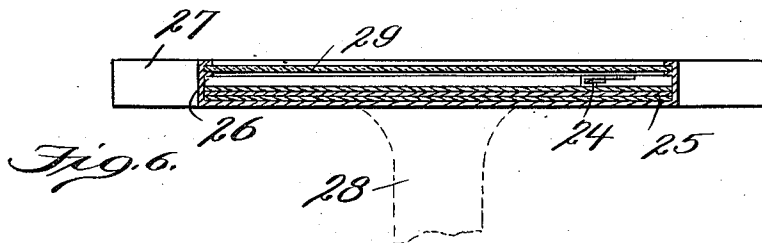
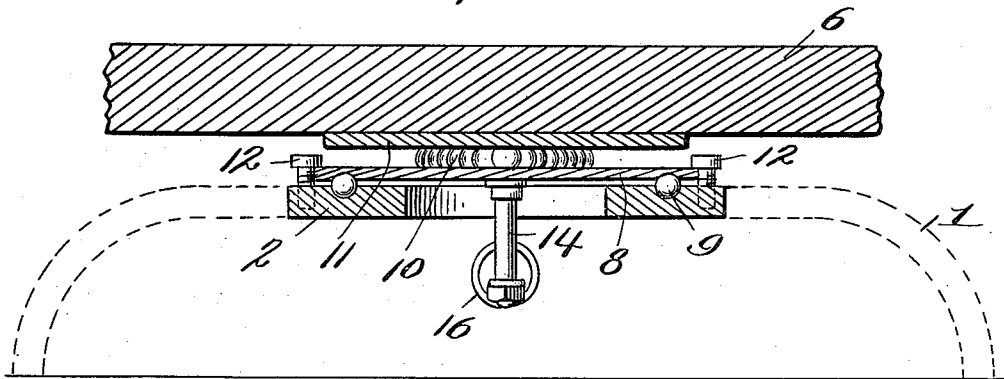


Fig. 7.

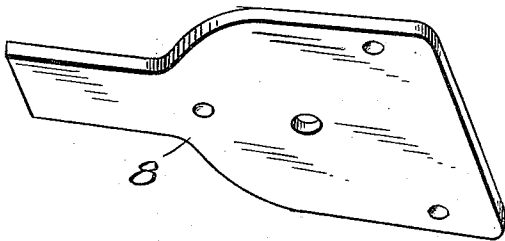
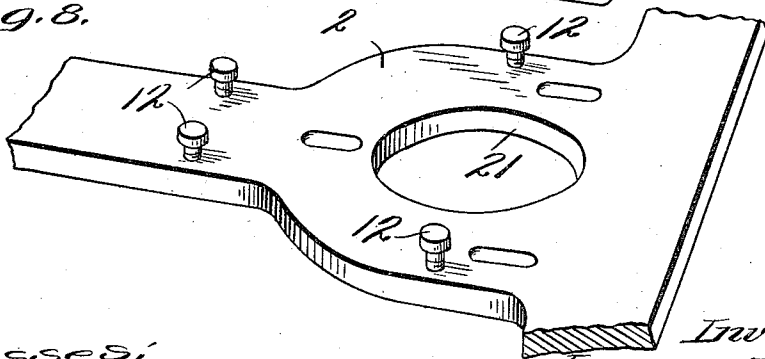


Fig. 8.



Witnessed:
John Powers.

Inventor
I. E. Lee
by *James L. Morris.*

Atty.

UNITED STATES PATENT OFFICE.

ISAAC EDWARD LEE, OF DAYTON, VIRGINIA, ASSIGNOR OF ONE-THIRD TO WILLIAM F. BOWEN, OF WASHINGTON, DISTRICT OF COLUMBIA, AND ONE-THIRD TO CHARLES W. BANE, OF HAGERSTOWN, MARYLAND.

CHEESE-CUTTER.

1,060,771.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed July 5, 1912. Serial No. 707,922.

To all whom it may concern:

Be it known that I, ISAAC EDWARD LEE, a citizen of the United States, residing at Dayton, in the county of Rockingham and State of Virginia, have invented new and useful Improvements in Cheese-Cutters, of which the following is a specification.

This invention relates to improvements in cheese cutters of that type wherein a rotatable table is employed as a support for a cylindrical block of cheese, and for coöperation with a knife which cuts the block of cheese into radial slices of desired weight. In the type of construction referred to, the knife carrying or actuating element is quite frequently connected by gearing to the table, and, where a computing arrangement is employed, said knife has been sometimes connected to the movable element of the computing arrangement.

The object of the present invention is to substantially improve cheese cutters of the type particularly described in respect of simplifying the construction and arrangement of the parts for coördinating the various principal elements, and in other substantial respects, which will be pointed out as the description proceeds.

An embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a side elevation of a cheese cutter in which the features of the invention are incorporated; Fig. 2 is a top plan view thereof, the cheese carrying table being broken away to disclose the parts over which said table is arranged; Fig. 3 is a view of the same character as Fig. 2, but showing different relations of the parts; Fig. 4 is a view of the same character as Fig. 1, but showing the relation of the parts when the knife is in its uppermost position; Fig. 5 is a detail cross sectional view, to a somewhat enlarged scale, on the line 5—5 of Fig. 4; Fig. 6 is a detail sectional view of a chart-holding frame; and Figs. 7 and 8 are detail perspective views of the companion plates included as parts of the supporting means for the table.

Similar characters of reference designate corresponding parts throughout the several views.

The support for the table and for the

other operating parts primarily includes a T-shaped base 1 having an elongated central leg 2, which projects for some distance beyond the table and terminates at its outer end in a vertical bracket 3 to which is pivoted for movement in a vertical plane a lever 4 which carries the cheese cutting knife 5. The table upon which the cheese is mounted is designated by the numeral 6, and is directly supported by a plate 8 which, in turn, is slidable on the leg 2 in the direction of the axis of said leg, roller bearings 9 being interposed between the leg 2 and the plate 8 to render the sliding movements of the latter without friction. Roller bearings 10 are interposed between the plate 8 and a wear plate 11, which is secured to the under face of the table 6, the bearings 10 rendering the turning movements of the table 6 without friction. The plate 8 is preferably positively held against displacement from the leg 2 as by retaining screws 12, or 75 equivalent devices.

The turning movements of the table 6 are produced by a friction wheel segment 13, which is mounted on an enlarged portion of the leg 2, adjacent the table, and is rotatable in a horizontal plane, its periphery being preferably corrugated or otherwise roughened so as to have a good frictional engagement with the periphery of the table 6. The segment 13 has, at one side thereof, a shoulder 13^a, by means of which the return movement of the segment to initial position is limited, the said shoulder engaging against the bracket plate 3, as shown in Fig. 2.

As already stated, the plate 8 is movable on the leg 2 in the direction of the axis of said leg, and the table 6 is movable with said plate, being connected to the leg by a vertical pin 14 which also forms the axis about which said table 6 rotates. A pin 15 depends from the leg 2, adjacent the outer end of said leg, and the pin 14 preferably has attached thereto one end of a retractile coil spring 16, the other end of said spring being connected to the pin 15, preferably by a chain 17. To move the table outwardly against the tension of the spring 16, a lever 18 is employed, this lever being pivoted on the aforesaid enlargement of the leg 2, adjacent the table, and having a lug 19 which engages the periphery of the table and pre-

vents the table from rotating, at the same time transmitting to said table the movement of the lever 18. To facilitate the outward movement of the table 6 the lever 18
 5 may be employed in connection with a laterally projecting arm 20, which is secured to, or formed as a part of, the leg 2, and which serves as a fixed hand grip to be grasped simultaneously with the lever 18. By virtue
 10 of the spring 16 and the lever 18, the table 6 may be slightly moved in either direction along a diameter thereof coincident with the axis of the leg 2, as an axis of slidable movement. The leg 2, adjacent its inner end, is
 15 formed with an enlarged opening 21 through which the pin 14 projects and which allows of the aforesaid sliding movement of the table.

As already stated, the friction wheel segment 13 produces a turning movement of the table 6, and the rotation of said segment is, in turn, produced by the lever 4, a chain connection 22 being interposed between said lever and said segment, whereby when the
 25 lever 4 is raised, the segment 13 will be turned. To return the segment 13 to normal position, a retractile coil spring 23 is preferably employed, one end of said spring being connected to said segment and the other end
 30 of said spring being connected to the bracket plate 3 aforesaid.

The computing device, in the embodiment shown, includes a movable pointer 24 which is mounted on the segment 13, and which
 35 traverses a chart 25 having printed thereon, in concentric rows, pound divisions and value indications for each pound division, based on a particular price at which cheese may be retailing per pound. The pointer
 40 24 has an indicating finger 24^a, slidable thereon, and which may be moved to overlie any particular pound division of the chart 25, in accordance with the weight of cheese on the table. Preferably, a number of charts
 45 are provided, each of which accords with the different prices which may be charged, and these charts are arranged in a compartment 26 of a supporting frame 27, the chart on top of the pile being the one which is in use and
 50 with which the finger 24^a coöperates. The frame 27 is supported by a standard 28 from the outer portion of the leg 2, and carries a glass panel 29 above the compartment 26, and through which the readings on the chart
 55 25 are visible. The pointer 24 works under the panel 29, and projects through a slot 30 in the inner side of the frame 27.

In use, the operator raises the lever 4 and thereby through the medium of the chain 22
 60 rotates the segment 13, and therewith the table 6, the degree of rotation of said table necessary to set off a block of cheese of determined weight or money value being indicated on the chart 25 by the finger 24^a.
 65 When the table 6 has been turned to set off

a block of cheese of the determined value, the upward movement of the lever 4 is arrested, and the table is moved outwardly by means of the lever 18 and against the tension of the springs 16, whereby the periphery of said table is disengaged from the segment 13. Thereupon the lever 4 is moved
 70 downwardly to make the cut, and the spring 23, in such downward movement of the lever 4, returns the segment 13 to normal or initial position, but without producing a turning movement of the table 6, since said table
 75 has, through the agency of the lever 18, been disengaged from the segment 13, as already explained. When the block of cheese, set off in the manner described, has been cut by the knife 5, the lever 18 is released, and the spring 16 draws the table inwardly, so that its periphery again comes into contact with the segment 13. This inward drawing
 80 movement of the table 6 is also effective to cause the lower edge of the knife 5 to cut through the cloth upon the bottom of the cheese.

In case the value of cheese requested is so large that it cannot be set off by one complete upward movement of the lever 4, the lever 4 may be moved downwardly sufficiently to enable the spring 23 to reset the segment 13, but not sufficiently to cause the
 90 knife 5 to make a cut in the block of cheese, and when the segment 13 has been reset, said lever may be raised so as to produce a further rotation of the table 6. When the lever 4 is moved downwardly to provide for the resetting of the segment 13, the table 6 is temporarily disengaged from said segment by an operation of the lever 18, in the manner already explained. The segment 13 may be reset in the manner stated as many times
 95 as may be required to produce an integral block of cheese of the value requested.

It will be understood that no specific description herein contained is intended to put any limitation upon the scope of the appended claims which does not inhere in the language thereof.

Having fully described my invention, I claim:

1. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table being movable into and out of engagement with said segment, a movable knife carrying element, and a connection between said knife carrying element and said segment.

2. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table being movable into and out of engagement with said segment, a movable knife carrying element, a connection between said knife carrying element and said segment, to turn the segment when
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 120
 125
 130

the knife is raised, and means for returning the segment to initial position when the knife is lowered.

3. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table being movable into and out of engagement with said segment, a movable knife carrying element, a connection between said knife carrying element and said segment, to turn the segment when the knife is raised, and a spring for returning the segment to initial position when the knife is lowered.

4. In a cheese cutter, a cheese carrying table, a plate on which the table is rotatable, a base on which the table and therewith the plate is slidable, a gear segment adjacent the table and adapted to engage the periphery thereof, means for sliding the table toward and away from the segment, a movable knife carrying element and a connection between said knife carrying element and said segment.

5. In a cheese cutter, a cheese carrying table, a plate on which the table is rotatable, a base on which the table and therewith the plate is slidable, a gear segment adjacent the table and adapted to engage the periphery thereof, a lever for sliding the table away from the segment, a spring for sliding the table toward the segment, a movable knife carrying element and a connection between said knife carrying element and said segment.

6. In a cheese cutter, a cheese carrying table, a plate on which the table is rotatable, a base on which the table and therewith the plate is slidable, a gear segment adjacent the table and adapted to engage the periphery thereof, a lever for sliding the table away from the segment, the lever having a projection to engage the periphery of the table, a spring for sliding the table toward the segment, a movable knife carrying element and a connection between said knife carrying element and said segment.

7. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table being movable into and out of engagement with said segment, a movable knife carrying element, a connection between said knife carrying element and said segment, and a computing device comprising a relatively movable pointer and chart, the movable element of said computing device being carried by said segment.

8. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table being movable into and out of engagement with said segment, a

movable knife carrying element, a connection between said knife carrying element and said segment, a pointer carried by said segment and a chart traversed by the pointer.

9. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table and the gear segment being relatively movable toward and away from one another, a movable knife carrying element, and a connection between said knife carrying element and said segment.

10. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, a movable knife carrying element, a connection between the knife carrying element and the segment to turn the segment when the knife is raised, means for returning the segment to initial position when the knife is lowered and means for preventing the engagement of the table and the segment when the latter is returned to initial position.

11. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto and adapted to engage the periphery thereof, the table and the gear segment being relatively movable toward and away from one another, a pivoted knife carrying lever, and a chain connecting said lever and said segment.

12. In a cheese cutter, a rotatable cheese carrying table, a gear segment adjacent thereto, and adapted to engage the periphery thereof, the table and the gear segment being relatively movable toward and away from one another, a pivoted knife carrying lever, a chain connecting said lever and said segment to turn the segment when the knife is raised, and a spring for returning the segment to initial position when the knife is lowered.

13. In a cheese cutter, the combination with a cheese carrying table and means for rotating the same, including a gear element to engage the periphery of said table, of a movable pointer carried by said gear element and having an indicating finger, and a stationary horizontal frame having a compartment in which differently calibrated charts may be arranged in a pile, the indicating finger traversing the uppermost chart.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ISAAC EDWARD LEE.

Witnesses:

CHAS. S. HYER,

JAMES L. NORRIS, Jr.