

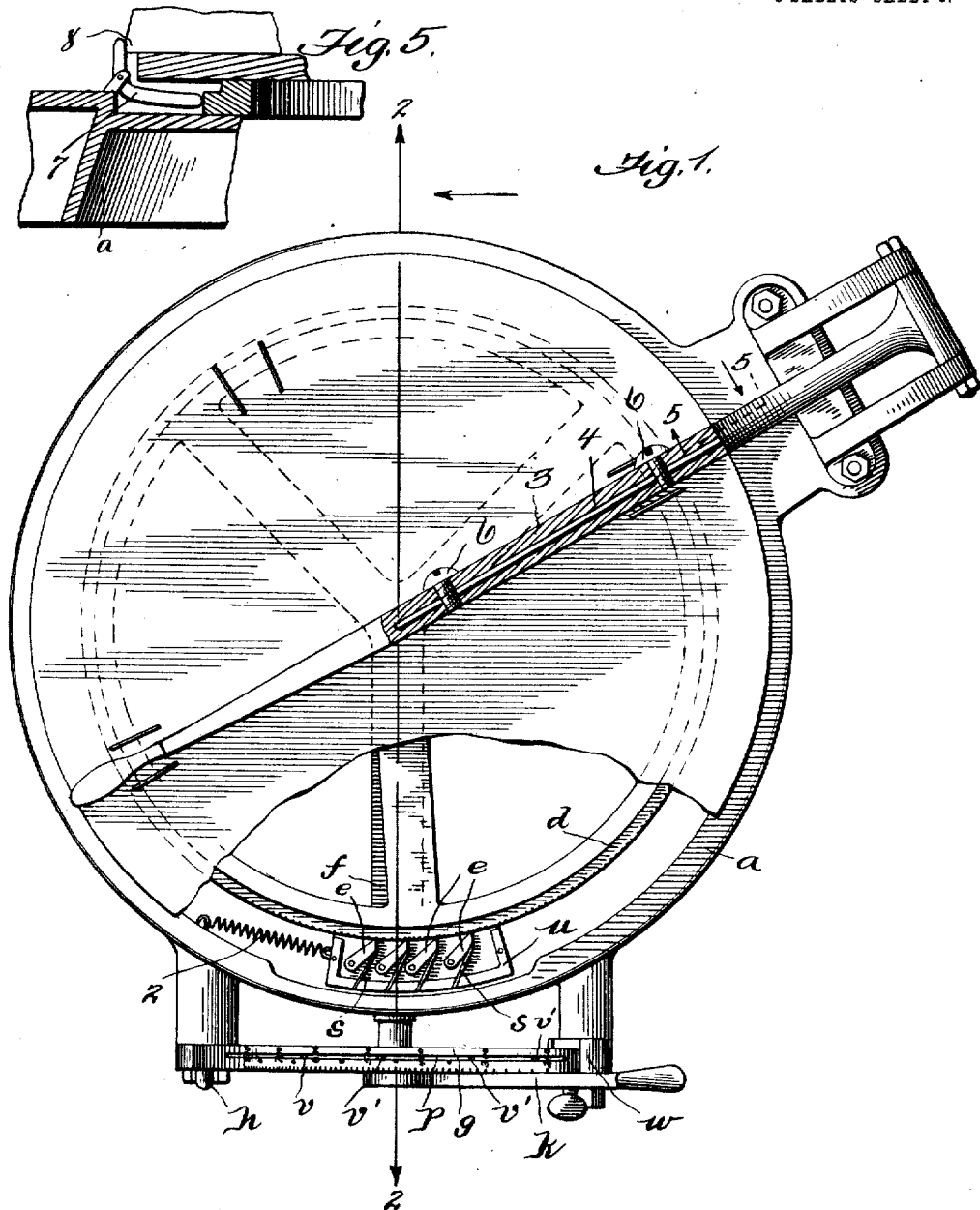
No. 829,391.

PATENTED AUG. 28, 1906.

H. F. DUNN.
CHEESE CUTTER.

APPLICATION FILED AUG. 15, 1904.

3 SHEETS—SHEET 1.



Inventor

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Witnesses

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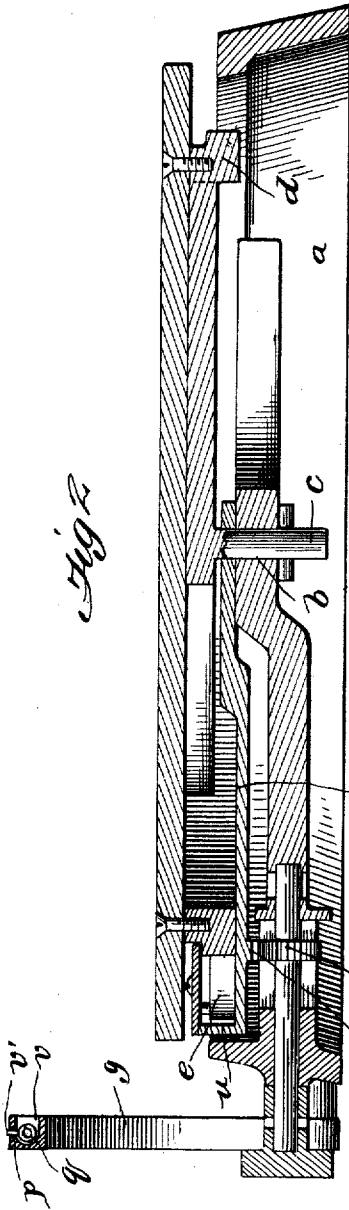
his Attorney

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3 SHEETS—SHEET 2.



Witnesses

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Fig. 4.

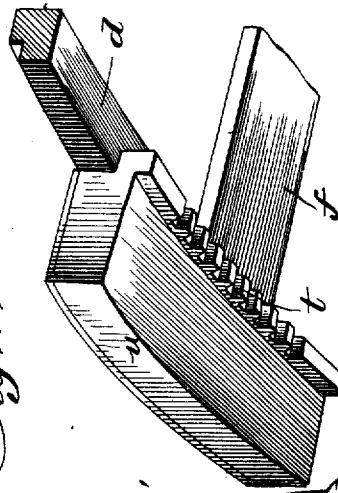
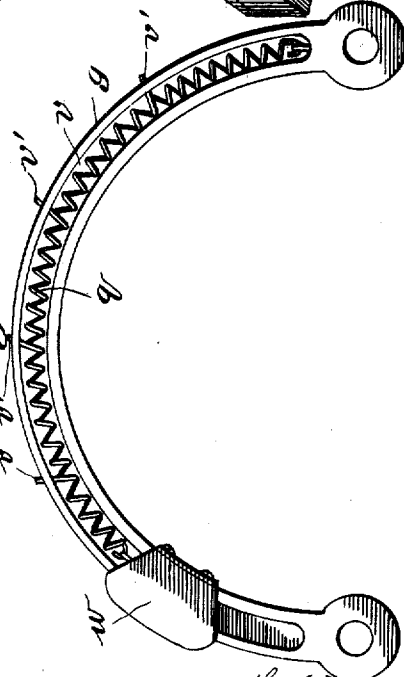


Fig. 3.



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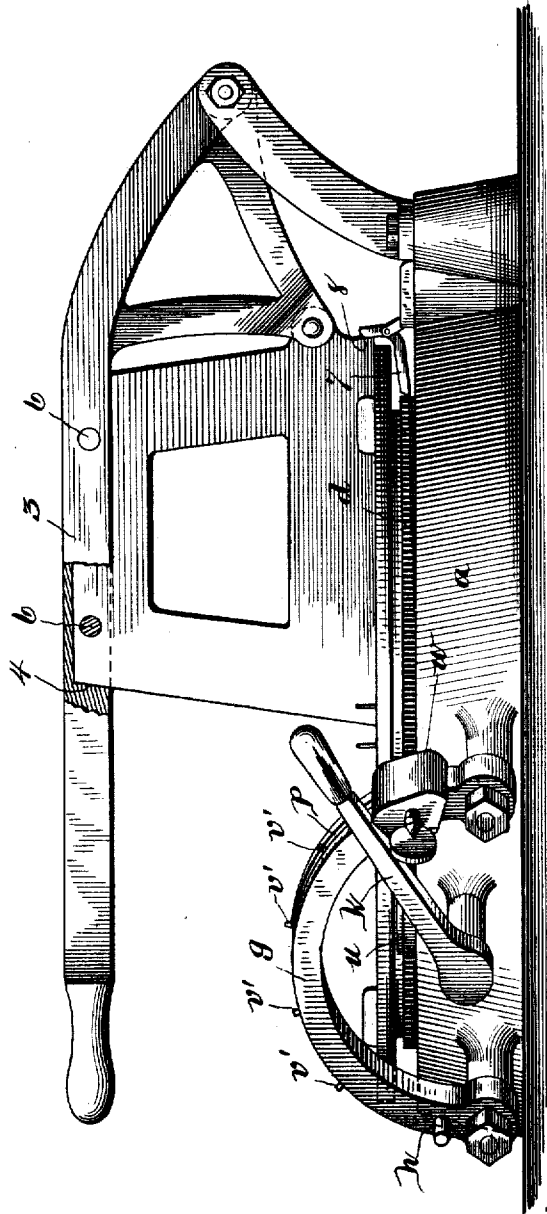
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3 SHEETS—SHEET 3.

Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY F. DUNN, OF ELWOOD, INDIANA, ASSIGNOR TO DUNN MANUFACTURING COMPANY, OF ANDERSON, INDIANA, A CORPORATION OF INDIANA.

CHEESE-CUTTER.

No. 829,391.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed August 15, 1904. Serial No. 220,859.

To all whom it may concern:

Be it known that I, HENRY F. DUNN, a citizen of the United States, residing at Elwood, in the county of Madison and State of Indiana, have made a certain new and useful
5 Invention in Cheese-Cutters; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings,
10 and to letters and figures of reference marked thereon, which form a part of this specification.

15 Figure 1 is a plan view of the invention. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is a detail view of the vertical arc scale-bar. Fig. 4 is a detail view of the ratchet-box. Fig. 5 is a detail view of the brake or
20 stop lever. Fig. 6 is a side view of the invention.

The invention relates to computing cheese-cutters; and it consists in the novel construction and combinations of parts, as herein-
25 after set forth.

In the accompanying drawings, illustrating the invention, the letter *a* designates the base, having a central bearing *b* for the pivot-pin *c* of the rotary wheel-frame *d*, which is
30 milled on its circumference sufficiently deeply to engage the pawls *e* of the radial lever *f*. This lever is also pivoted on the pivot-pin *c*, being provided at its inner end with a bearing for the purpose. To the
35 wheel-frame *d* is secured a wooden cheese-board, on which the cheese is designed to be placed and properly centered.

At the periphery of the base opposite the outer end of the radial lever and spanning its
40 path of movement is secured to the base a vertical arc-bar *g*, the upper surface of which is provided with graduation-marks, representing total values of cheeses. This arc-bar is provided near one end with a stop-lug
45 *h*, which marks the point of beginning for a movement of the vertically-operating handle *k*, which is pivoted in a bearing of the base centrally between the arms of the arc-bar and is provided on its inner end with a
50 pinion *m*.

The radial lever *f* is provided with a boxing *u* above this pinion, said boxing containing the pawls *e* and their springs *s* and having upon its under side the rack-teeth *t* in en-

gagement with the pinion *m*. Upon the arc-bar is located the limiting or indicator stop
55 *w*, which is adjustable to position in accordance with the value of the cheese upon the board of the cutter.

In the arc-bar is a longitudinal recess *v*,
60 having a slot *p*, and in the recess is located a coil-spring *g*, one end of which is attached to the arc-bar near the stop-lug *h* or point of beginning and the other end of which is attached to the adjustable stop *w*. This coil-
65 spring is provided with four indicators *v'* at even distances apart, and from the stop-lug *h* and from the adjustable stop *w*, said indicators projecting through the slot *p*. These indicators serve to mark, respectively, the
70 worth of one cent, of two cents, of three cents, and of four cents. They are automatically adjustable proportionally to the total value of the cheese as indicated on the arc-bar scale, owing to their connection with
75 the spring.

When the limiting-stop is set for a certain portion of cheese—that is to say, for instance, five cents' worth—by moving the handle *k* from its starting position to the limiting-
80 stop, then back to starting position, and then forward again to the third indicator *v*, eight cents' worth will be measured, for the action of the cutting-knife, as the pawls *e* act to rotate the wheel-frame *d* in one direction only.
85

In a similar manner seven or nine cents' worth can be measured off, always with the advantage of avoiding any half-cent complications.

To the pawl-boxing *u* at one end is connected a spring 2, the other end of which is connected to the base. This spring is designed to hold the pawls to their work in an exact manner, taking up the play at the bearings, notwithstanding there may be
95 some wear of the operating parts.

The knife-handle 3 is pivoted to an arm of the frame and is provided with a vertical slot bearing or recess 4 in which the knife-blade is seated, being held there by set-screws 6. In
100 order to provide against moving the operating-handle before raising the knife, a lock is provided to be operated by the knife in the following manner: The base is provided with a brake or stop lever 7, having an arm projecting above the board or table on which the cheese is placed and at the back of said board in the path of the point portion 8 of

the knife. When the knife is brought down in cutting off a slice of cheese, it engages the stop-lever, which in turn engages the wheel-frame, holding it in locked position until the knife is raised, when said wheel-frame is at liberty to be moved by the operating-handle.

The total-value scale, herein shown on the scale-bar *g*, is mounted inversely with relation to the movement of the actuating handle-lever *k*—that is, in the direction of the forward movement of said lever said scale diminishes from a higher numeral to smaller numerals, so that the larger numeral is nearer the fixed stop *h*. Furthermore, the distance between the graduations increases gradually in the direction of the forward movement of said lever and in a direction away from said fixed stop. Also the means actuated by the handle-lever *k* for moving the cheese-carrier is so arranged that at each movement of said handle-lever and carrier the handle-lever will move through a greater arc than the carrier. This feature of the arrangement, in combination with the inversely-arranged total-value graduation-scale, as set forth, constitutes a very important and practically valuable improvement in computing cheese-cutters. It furnishes a device wherein the total selling price only is necessary to be known by the operator for setting his adjustable stop and then the handle-lever will have a uniform throw or movement through a relatively considerable arc, so that the graduations and numerals of the scale may be far enough apart to be readily visible and to render convenient the adjustment of the adjustable stop as well as partial operations of the actuating handle-lever *k*. Therefore with this device portions of uniform value may be cut from cheeses of varying weights and values at each throw of the lever, and after the device has been set for a certain cheese each throw of the lever, even in the dark, will move the cheese so that there will be cut therefrom portions of a certain unit of value. While the part marked *k* herein is called an "operating-handle," it is mechanically a lever for actuating the cheese-carrier.

Having described the invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cheese-cutter, the combination with the base and the wheel-frame centrally pivoted thereto, of the pivoted radial arm, the clutch device and rack-teeth located thereon, the arched scale-bar, the operating handle-lever, its journal and the pinion on said journal engaging said rack-teeth, substantially as specified.

2. In a cheese-cutter, the combination with the base and the toothed wheel-frame centrally pivoted thereto of the pivoted radial arm, its pawl-boxing, the pawls and rack-teeth of said boxing, the arched scale-bar, its adjustable stop, the operating-handle, its

journal and the pinion on said journal engaging said teeth, substantially as specified.

3. In a cheese-cutter, the combination with the base and the wheel-frame centrally pivoted thereto, of the slotted cutter-handle, pivoted to the base, the blade and means for holding the wheel-frame in locked position when the handle is down to base, and releasing said wheel-frame when the handle is raised, substantially as specified.

4. In a cheese-cutter, the combination with the base, and its centrally-pivoted wheel-frame, of the pivoted cutter, the operating handle-lever, means in connection therewith for moving the wheel-frame, and means for locking the latter when the cutter is down to base, substantially as specified.

5. In a cheese-cutter, the combination with the base, and the toothed wheel-frame having a pivot-stud centrally engaging the base, of the radial lever pivoted on said stud, its pawl-box, pawls and rack, the take-up spring of the pawl-box, the operating handle-lever and its pinion, substantially as specified.

6. In a cheese-cutter, the combination with the base, the pivoted wheel-frame, and a clutch-operating device in connection therewith, of a take-up spring, connecting the clutch device to the base and operating to take up the lost motion of the clutch-operating device substantially as specified.

7. In a cheese-cutter, the combination with the base, the pivoted frame thereon, and a reciprocating operating handle-lever in connection with clutch mechanism for operating the frame, of a recessed scale-bar, its adjustable indicator-stop, the indicator-spring in the recess of the scale-bar and connected to said stop, and the equidistant indicators carried by said spring, substantially as specified.

8. In a cheese-cutter, the combination with the base, the pivoted frame thereon, and a reciprocating indicator handle-lever and means operatively connecting said handle-lever and the pivoted frame, of a recessed scale-bar, its adjustable indicator-stop, an extensible proportional indicator device in the recess of said scale-bar and connected to said stop, and the equidistant indicators of said indicator device, substantially as specified.

9. In a device for cutting cheese and the like into portions, a knife, a movable cheese-carrier, a handle-lever movable through varying distances for operating said cheese-carrier, a scale-bar along which said lever moves, an adjustable stop for determining the limits of movement of said lever, and an automatic proportional indicator for indicating proportions of the varying distances through which said lever moves.

10. In a cheese-cutter, the combination of a support for the cheese, a knife adapted to move in a plane radial to the cheese when on said support, an oscillating part adapted to

change the relative angular position of said knife and support in proportion to the extent of its travel, a stop upon each side of said oscillating part, means for varying the position of one of said stops to limit the motion of the oscillating part, and means for automatically indicating a proportional part of the travel of the oscillating part at all positions of the movable stop.

11. In a device for cutting cheese and the like into portions, a rotary cheese-carrier, a handle-lever for causing the movement of the same, a scale-bar along which said lever moves, an adjustable stop on said scale-bar for limiting the movement of said lever, and a proportional indicator extending along said scale-bar that is held stationary at the starting-point of said lever and at the other end is connected with said stop.

12. In a device for cutting cheese and the like into portions, a knife, a movable cheese-support, a lever for actuating the cheese-support, scale-controlled means for setting the device to cut pieces of a certain unit of value

from cheeses of varying sizes and prices per pound at each complete movement of said lever, and means along the line of movement of said lever for indicating the proportional parts of such movement.

13. In a device for cutting cheese and the like into portions, a knife, a movable cheese-support, a lever for actuating the cheese-support, scale-controlled means for setting the device to cut pieces of a certain unit of value from cheeses of varying sizes and prices per pound at each complete movement of said lever, stops for limiting the extent of movement of said lever, and means along the line of movement of said lever and between said stops for indicating the proportional parts of such complete movement.

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

HENRY F. DUNN.

Witnesses:

JESSE LUCAS,
PEARL SPURGEON.