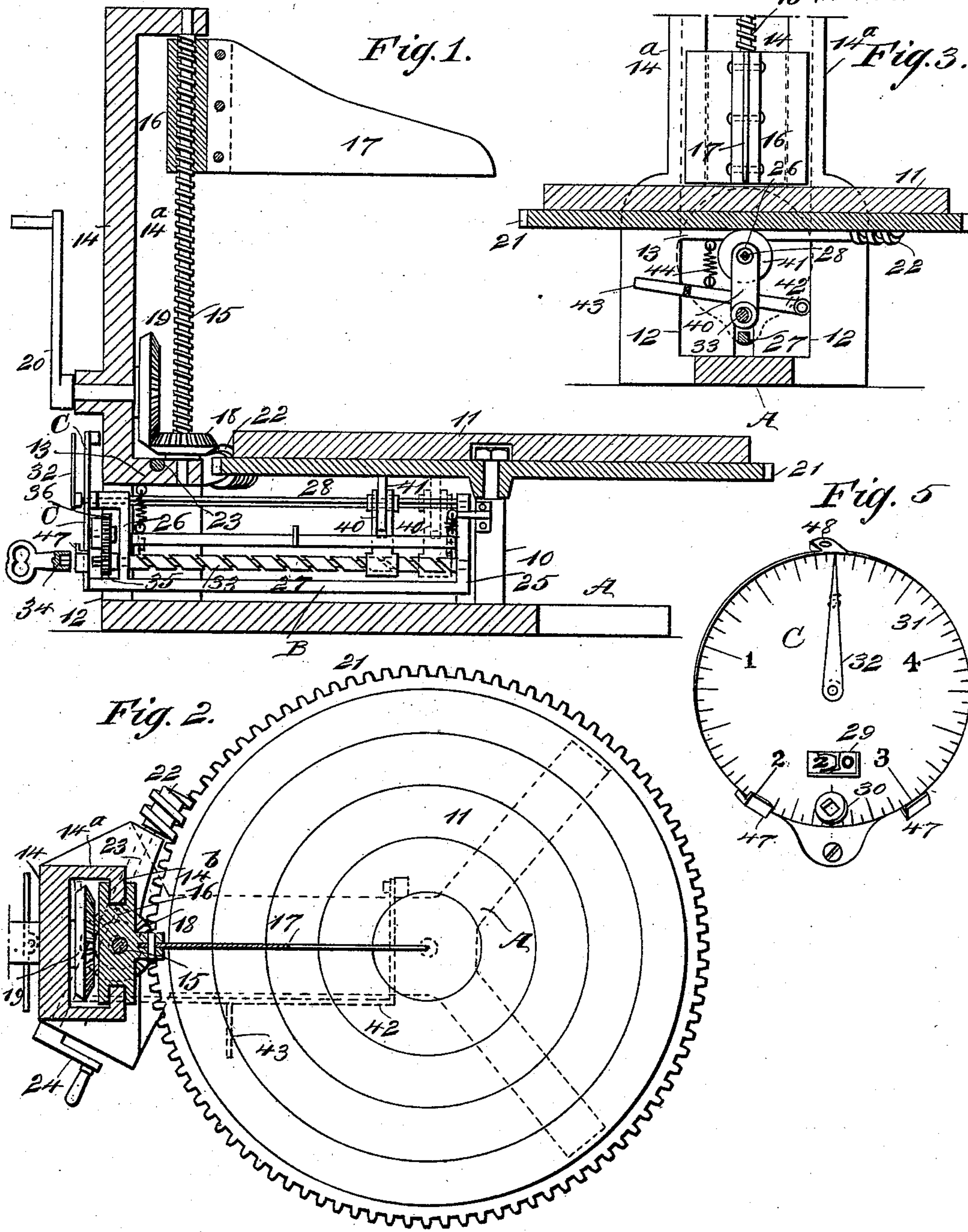


(No Model.)

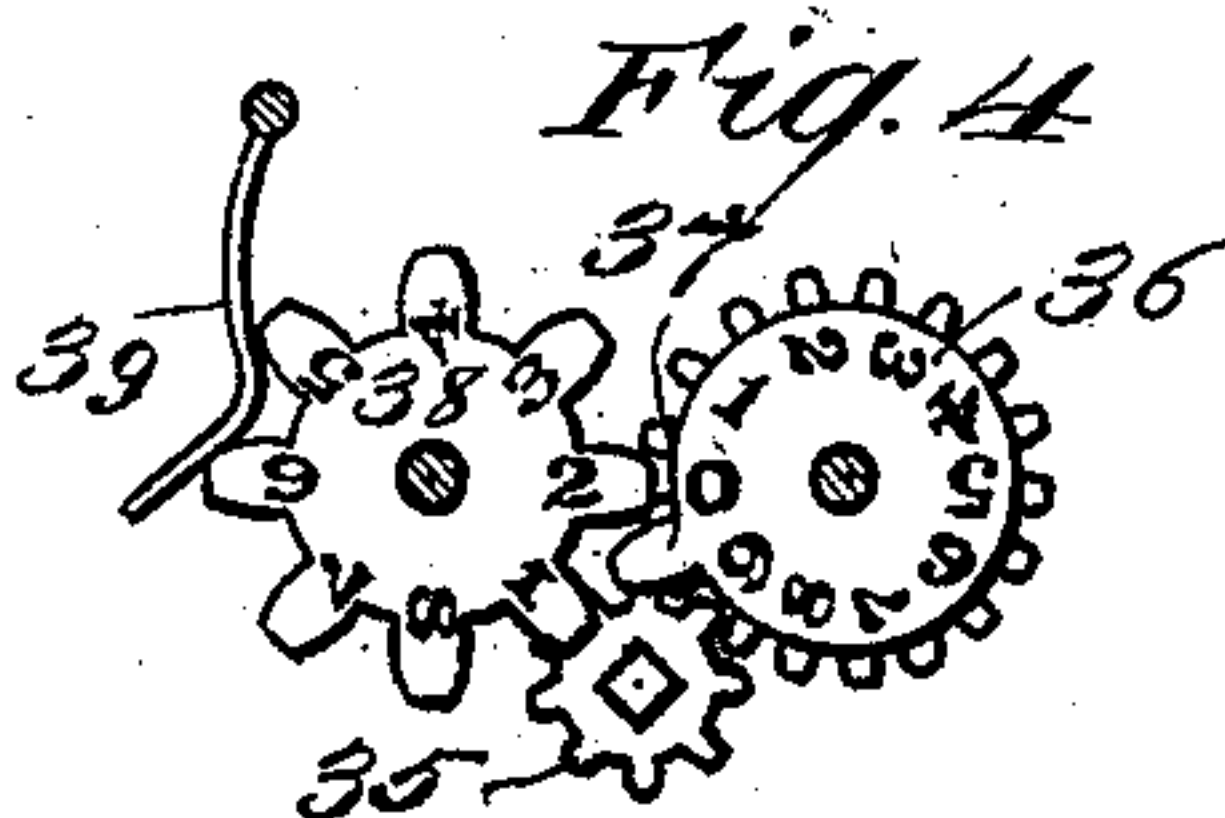
F. J. SIEWERS.
CHEESE CUTTER.

No. 532,712.

Patented Jan. 15, 1895.



WITNESSES:
Donn Twitchell
John A. Key



INVENTOR
F. J. Siewers
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

FREDERICK J. SIEWERS, OF GALENA, ILLINOIS, ASSIGNOR OF ONE-HALF TO
WILLIAM F. SHUTZ, OF CHAMBERLAIN, SOUTH DAKOTA.

CHEESE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 532,712, dated January 15, 1895.

Application filed June 12, 1894. Serial No. 514,336. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. SIEWERS, of Galena, in the county of Jo Daviess and State of Illinois, have invented a new and
5 Improved Cheese-Cutter, of which the following is a full, clear, and exact description.

My invention relates to a cheese cutter, and it has for its object to provide a machine in conjunction with which a knife is employed,
10 and a table or platform utilized to support the cheese beneath the knife.

A further object of the invention is to so construct the machine that a dial will be connected with the platform in such a manner
15 that when the platform is moved a certain distance the pointer of the dial is moved to indicate a pound or the fraction of a pound, or two or three pounds. The platform upon which the cheese rests will then have been revolved
20 a sufficient distance to cause the knife, when brought in operation, to cut the exact amount designated on the dial from the cheese, the cut being made from a predetermined line drawn from the center, the operative mechanism of the dial being also set in accordance
25 with the known weight of the entire cheese.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth
30 and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the
35 views.

Figure 1 is a vertical section taken practically on through the center of the improved machine. Fig. 2 is a plan view of the bed of the machine and a vertical section through
40 the upright or standard projected from the bed. Fig. 3 is a section through the table and through the base of the machine at the rear of the actuating mechanism for the dial. Fig. 4 is a detail view of the recording mechanism adapted to record the weight of the
45 cheese to be operated upon; and Fig. 5 is a front elevation of the principal dial employed, indicating pounds and fractions thereof.

The base A may be of any desired height
50 and the cheese-receiving platform 11, is

usually in practice made to rest upon the base. The base is also so bisected that nearly all the mechanism is below the upper surface of the base, the only exception being that mechanism which transmits motion from the platform to a pointer upon a dial, indicating
55 pounds and fractions thereof or dollars and cents. In the drawings, however, a standard 10 is erected upon the base A, and upon said standard the platform 11, preferably circular, 60 is mounted to revolve.

The standard 10 may be located near one end of the base, and near the outer end a second standard 12 is projected from the base. The standard 10 is located near the center of
65 the base, and the base at its inner end is preferably bifurcated, as shown in dotted lines in Fig. 2, its outer end being widest, and the said outer end may be made to support two standards 12, as shown in Fig. 3, one at each
70 side, the said standards being connected at their upper ends by a cross bar 13, which cross bar is adapted to support a vertical standard 14, which standard may be provided, as shown in Figs. 2 and 3, with side members
75 14^a, and inwardly-extending flanges 14^b, projecting from the side members.

A screw shaft 15 is journaled in an upper overhanging portion of the standard 14 and in the cross bar 13, as shown best in Fig. 1,
80 and the threaded shank 16 of a cheese knife 17, is held to travel upon the said screw shaft, the cutting edge of the knife 17 being preferably a chiseled edge, so that when it enters the cheese it will not force it to one side or the
85 other and will hold the cheese firmly in place.

The screw shaft 15 may be manipulated in any manner to manipulate the knife, one way being illustrated in Fig. 1, which consists in fixing a beveled pinion 18 firmly upon the
90 lower portion of the screw shaft and causing said pinion to mesh with a beveled gear 19 journaled in the standard 14 and operated through the medium of a crank 20, or like device.

The table or platform 11 is circular, and is provided with peripheral teeth 21, and this platform is usually revolved through the medium of a worm wheel 22, meshing with the
95 teeth 21 and attached to the shaft 23, which 100

is journaled in the cross bar 13, and is operated through the medium of an attached crank 24.

The frame B, comprising two upright end bars 25 and 26 and a bottom bar 27, is held to slide in the standard 10 and in suitable guide-ways between the standards 12 located upon the base. The movement of the frame B is vertical, or in direction of the bottom of the platform 11, and said frame has journaled at its upper end, or in the upper portion of its side bars 25 and 26 a shaft 28, which shaft between its journals is square or polygonal in cross section, and upon a projection from the upper end of the member 26 of the sliding frame B a dial C, is rigidly secured, which dial, as shown in Fig. 5, is provided with an opening 29 a predetermined distance from its margin, and a second opening 30, usually located below the opening 29. This dial is provided with a scale 31, representing for example pounds and fractions of a pound, and the pointer 32 of the dial is secured upon the outer end of the shaft 28, which is free to turn in a suitable aperture in the dial.

A second shaft 33 is journaled in the lower portion of the vertical sliding frame B, the latter shaft being a screw shaft, and its outer end is preferably squared in order that the said shaft may be turned through the medium of a key 34, which is introduced through the lower opening 30 in the dial. The screw shaft 33 carries near its outer end a pinion 35, which for example may be provided with twelve teeth, and this pinion is made to engage with the teeth of a wheel 36, journaled in any approved manner between the outer end of the screw shaft 33 and the support for the dial C.

The wheel 36 is provided with peripheral teeth, for example twice the number of teeth of the pinion 35, so that the pinion with twelve teeth must make two revolutions in order to turn the wheel 36 once; and the said wheel 36, is provided with a finger 37, projecting from its periphery, which is made to enter between the teeth of a second wheel 38. This wheel will be turned the distance of one tooth at each complete revolution of the wheel 36, and the wheel 38, is held in proper position, or the position in which it is placed, by a detent 39, as shown in Fig. 4. The wheel 36, has produced upon its outer face numbers running from "1" to "9," a "0" intervening the "1" and "9;" and upon the corresponding face of the wheel 38, numbers are also produced, ranging from "1" upward. The wheels 36 and 38, are so located that a number from each may be made to appear at the opening 29 in the dial, as in Fig. 5, and these two wheels are adapted to permanently indicate at the opening 29 the weight of the cheese placed upon the platform.

A carriage 40, is held to travel upon the screw shaft 33, being moved thereby; and the said carriage is provided with a wheel 41, journaled upon its upper end and mounted

to slide upon the upper square shaft 28, and when the wheel is turned the shaft 28 is turned also. The wheel 41 is set at different distances from the center of the platform 11, by means of which the wheel is to be revolved, according to the weight of the cheese carried by said platform. If the cheese is a very heavy one, the wheel will be carried nearer the periphery of the platform, and if the cheese is light, it will be carried nearer to the pivot of the platform. For example, the wheel 41 is made one and a quarter inches in diameter, and when the cheese upon the platform weighs ten pounds, the wheel will be moved about one and a quarter inches from the center of the platform in order to produce a proper movement of the dial pointer and to cause the cuts in the cheese to properly tally in weight with the weight indicated on the dial.

The sliding frame B is held in an upper position, or so that the wheel 41 will be in engagement with the platform as shown in Fig. 3, through the medium of a rocking frame 42, pivoted for example to one of the standards 12, and attached to the end members of the sliding frame, the rocking frame being provided with a suitable handle 43, and it is held in elevated position by springs 44, attached to the rocking frame at its ends, and to a fixed support upon the base portion of the machine. In the operation of regulating the mechanism, the frame 42 is pushed downward by manipulating the handle 43, and the wheel 41 is thereby carried clear of said platform.

In the operation of cutting the cheese, the cheese is placed upon the platform, its weight being known, and the wheel 41, is carried out of contact with the platform. The screw shaft 33 is then rotated until the weight of the cheese is made to appear at the opening 29 in the dial. If for example, the weight of the cheese is twenty pounds, the screw shaft will have been turned a sufficient number of times to operate upon the wheels 36 and 38 to bring the "0" on one wheel at the opening and the "2" upon the other wheel in front of the "0," and in so doing the shaft 33 in turning will have caused the carriage 40 to be drawn from the center or pivot of the platform outward a suitable distance to cause the platform to move the wheel 41 sufficiently to cause the pointer to indicate the weight on the dial of the section of cheese on the platform between the last cut and the knife. The machine having been set, and the customer for example desiring two pounds of cheese, a cut is made in the cheese on a predetermined line from the center, the line being brought immediately beneath the knife 17. The platform is then revolved until the pointer 32 is moved, for example, from the top of the dial until the figure "2" is reached, indicating two pounds, the movement being accomplished by the rotation of the wheel 41 through contact with the platform, or in indicating two pounds the pointer will have to

turn upon the face of the dial, a distance equal to two pounds, for example from $1\frac{1}{2}$ to $3\frac{1}{2}$ or from 2 to 4. Thus when the knife shall sever this strip from the body of the cheese said strip will be found to weigh the desired amount, namely, two pounds.

The knife is raised and lowered by manipulating the crank arm 20, or other means may be employed for that purpose.

10 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a cheese cutter, the combination, with a revoluble platform and a knife held to reciprocate over said platform, of a fixed dial, a revoluble pointer traveling over said dial, a driving connection between the platform and dial, a regulating shaft in regulating connection with the mechanism driven by the platform, and a recording mechanism having regulating connection with the regulating shaft, as and for the purpose set forth.

2. In a cheese cutter, the combination, with a revoluble platform and a knife held over the platform, capable of movement to and from the same, of a shaft carrying a pointer, and a wheel loosely mounted upon the shaft yet adapted to turn therewith and to engage with the bottom of the platform and be driven thereby, a screw shaft, a carriage in which the wheel is journaled, operated by said screw shaft, a dial across which the pointer is adapted to move, wheels adapted to mesh, and bearing numbers indicating pounds, which numbers are adapted to appear at an opening in the dial, and a driving connection between

the screw shaft and one of said numbered wheels, as and for the purpose set forth.

3. In a cheese cutter, the combination, with a revoluble platform and a knife held to reciprocate over said platform, of a fixed dial, a revoluble pointer traveling over said dial, a driving connection between the platform and dial, a regulating shaft in regulating connection with the driving mechanism of the dial, a recording mechanism having regulating connection with the regulating shaft, a shifting device connected with the dial driving mechanism, whereby the pointer can be moved back and forth without moving the platform, and means, substantially as shown and described, for revolving the platform, as and for the purpose set forth.

4. In a cheese cutter, the combination, with a revoluble platform and a knife held to reciprocate to and from the platform, of a dial scaled to indicate pounds and the fractions thereof, a driving mechanism for the dial, operated by the platform, a shaft operating with the said driving mechanism and provided with an attached pointer adapted to move over the scale of the dial, a recording mechanism adapted to register the initial weight of the cheese to be cut, a regulating shaft connected with the said dial driving mechanism, and a driving connection between the regulating mechanism and the regulating shaft, as and for the purpose set forth.

FREDERICK J. SIEWERS.

Witnesses:

W. RIPPIN,

R. A. OLIVER.