I. L. KEITH.

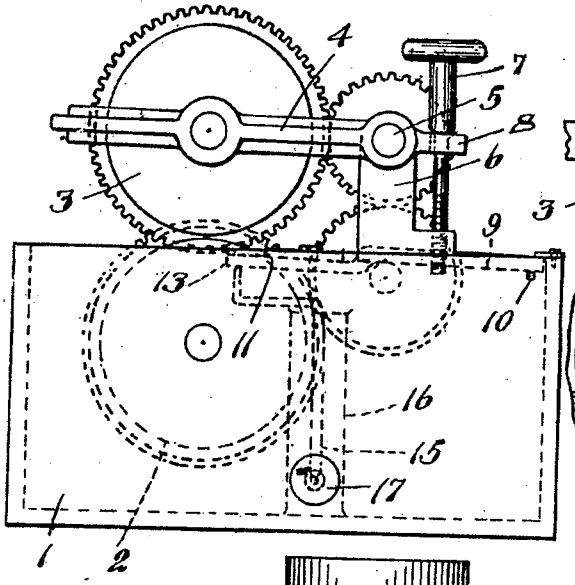
SOLE CEMENTING MACHINE.

APPLICATION FILED APR. 26, 1913.

1,099,551.

Patented June 9, 1914.

Fig. 1.



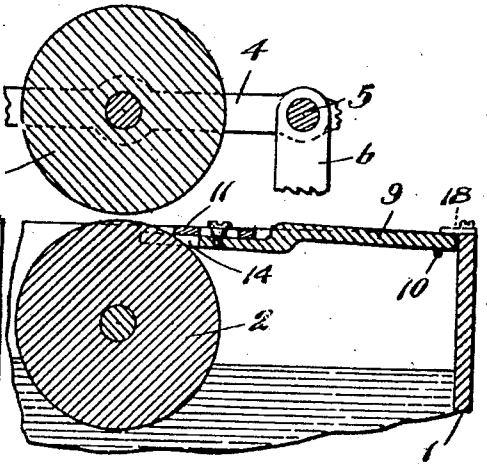


Fig. 3.

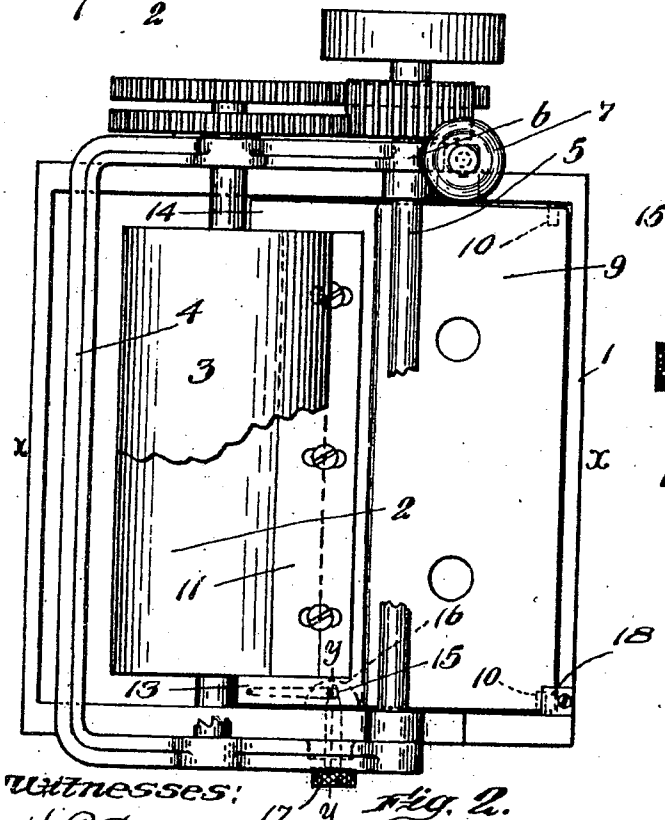


Fig. 2.

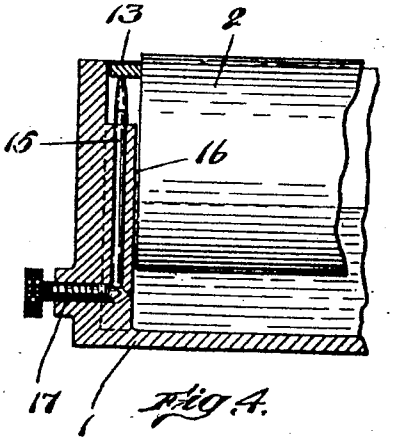


Fig. 4.

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UNITED STATES PATENT OFFICE.

IRVING L. KEITH, OF HAVERHILL, MASSACHUSETTS.

SOLE-CEMENTING MACHINE.

1,099,551. Specification of Letters Patent. Patented June 9, 1914.

Application filed April 25, 1913. Serial No. 763,543.

To all whom it may concern:

Be it known that I, IRVING L. KEITH, a citizen of the United States, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented an Improvement in Sole-Cementing Machines, of which the following is a specification.

This invention relates to certain improvements in machines for applying cement to the fore-part of a sole, in which the operator passes the sole sidewise through the machine, while retaining hold of the heel portion of the sole, and in which the lower roll runs in a bath of cement, so that it is constantly supplied with a surplus amount of cement, which must be removed from the surface thereof just previous to the passage of such surface to the point where it engages the sole to apply the cement thereto.

Prior to my invention various scraping devices for removing the surplus cement from the lower roll have been provided in machines of this character, but these devices, while they may be adjusted so that the surplus cement will be removed from the cement-applying surface, nevertheless are difficult of adjustment, and cannot be readily adjusted according to varying conditions. As different soles require the application of different quantities of cement, and as the fluidity of the cement varies, adjustment of the scraper plate is frequently necessary, or desirable.

The object of my invention is to provide a cementing machine of the above described type with a form of scraper device for removing surplus cement, which may be readily and easily adjusted by the operator, as he stands in position to use the machine, so that the amount of cement applied may be accurately determined and readily varied.

I accomplish these objects by the means shown in the accompanying drawing, in which—

Figure 1 is a front elevation of a cementing machine provided with my invention. Fig. 2 is a plan view thereof. Fig. 3 is a central longitudinal section on the line *x—x* of Fig. 2, and Fig. 4 is a detail sectional view on the line *y—y* of Fig. 2.

As shown in the drawing, the tank 1 of the machine is adapted to contain liquid cement, steam-coils or other suitable heating means being preferably provided, so that the cement may be applied while hot. The cementing roll 2 is journaled in the sides of the tank, so that the lower portion thereof dips in the cement contained therein, said roll being of solid cylindrical form.

The presser roll 3 is journaled in parallelism with the roll 2, in a frame 4, mounted on a pivot shaft 5 supported by a bracket 6, at the rear end of the machine, said frame being adapted to be raised or lowered, about the shaft 5 as a center, by means of the adjusting screw 7, which bears on a lug 8, integral with the frame 4, and is threaded in the bracket 6, the roll 3 being lifted by turning the screw down and being lowered by turning it up. Suitable gears are provided from the main shaft for driving the rolls 2 and 3 at the same surface speed. The mechanism, as thus far described constitutes no part of my invention.

According to my invention I provide a cover plate 9, which is adapted to fit into the top of the tank at one side of the roll 2 and to rest on a pair of supporting pins 10 in the walls of the tank adjacent the right side thereof and below the upper edge of said walls, so that a pivotal support is provided for said plate at this point, which permits its opposite edge to be raised or lowered, and also permits its ready removal to fill the tank.

A scraper plate 11 is adjustably secured to the upper side of the plate 9 by a series of clamping screws 12, which pass loosely through slots formed in the plate 11, and are threaded in plate 9, the portion of plate 9 on which plate 11 rests being offset, so that the upper surfaces of said plates are approximately in the same plane. The free edge of the plate 11 is thus adapted to rest by gravity on the surface of the roll 2, at some point above the level of its axis, between the plane of the axes of the rolls 2 and 3 and the surface of the cement in the tank.

A pair of fingers 13 and 14 are formed to project from the front edge of the plate 9 for some distance beyond the roll-engaging edge of the plate 11, at each end of the roll 2, the side edges of said fingers being arranged in close proximity to the ends of the roll, as shown in Fig. 2. An adjustable support, in the form of a rod 15, is mounted to move vertically in a boss 16, on the inner side of the tank, and the upper end of said rod 15 is extended in position to engage the under side of the finger 13. A lifting screw 17, having a conical-shaped end, is threaded in

remain in engagement with sprocket wheels 39 during feeding and delivering operations, and thence being guided by wheels 44 out of the path of conveyer 4 so that the holders when empty or during their travel between wheels 3, will remain idle.

Each support 37, at a point near its upper portion, is provided with a longitudinal opening 50 which is normally closed by a door 51 adapted to slide in a circumferential direction in guides 52 thereof. On the opposite side of the support and at the lower portion thereof, another opening, as 53, is provided, this opening being provided with a slidable door 54 held by guides 55 in identically the same manner as the door 51.

One of the direction wheels 44 for chains 40 is provided on its shaft with a pulley 56 which is driven continuously by a belt 57 taking over a fast pulley 58 on the shaft 59 of a suitable motor 60. Motion is communicated to conveyer 4 by a belt 61 taking over a loose pulley 62 of shaft 59, and over a pulley 63 fixed to the shaft of one of the direction wheels 2. Loose pulley 62 is provided with a clutch part for engagement with a shiftable clutch part 64, splined to shaft 59 and provided with a shifting lever 65.

In the operation of the apparatus, as supports 37 arrive at a point opposite platform 30, the sprocket wheels 39 of their holders 32 engage chains 40 and simultaneously with such engagement, the operator shifts clutch part 64 to stop the conveyer. Door 51 is now opened and the bottles in rows are fed down platform section 31, top foremost into the seats 35, which latter are presented successively through the rotation of the holders by chains 40. During this feeding operation a holder containing treated bottles will be opposite delivery chute 20 and the door 54 of that holder will be opened so that the bottles can slide by gravity therefrom as the several seats 35 are brought into registration with the discharge opening 53. In this connection it will be noted that I prefer to operate chains 40 in a direction opposite to that of the travel of conveyer 4 by which I am enabled to obtain a comparatively slow movement of the holders during the feeding and delivery periods.

By providing the seats 35 which radiate from hub 36 of a holder, and operating such holder in the manner described the bottles are moved end over end during their travel on the conveyer. By the end over end movement the contents of a bottle are caused to flow back and forth, traveling well up into the neck, thereby insuring of a more thorough treatment of the contents and minimizing danger of breakage through unequal expansion or contraction of the bottle.

In the drawings I have shown the chains 40 arranged out of the path of the conveyer at the lower portions of tanks 7, 8 and 9. These chains however, can obviously be otherwise provided or arranged without departing from the spirit of my invention with respect to the agitation of the products to be treated during their travel in the several tanks. Further I desire it understood that the term "bottle" as herein employed is intended to cover any form of receptacle suitable for holding the products to be treated.

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

1. In a pasteurizing apparatus, a pasteurizing chamber, a conveyer supported for movement through said chamber, a receptacle holder rotatably mounted on said conveyer, means for operating said conveyer, means for stopping said conveyer, and means for rotating said receptacle holder during the intermissions of operation of said conveyer.

2. In a pasteurizing apparatus, a pasteurizing chamber, a conveyer extending through said chamber, means for operating said conveyer, a receptacle holder mounted on said conveyer for relative movement, means for terminating the movement of said conveyer, and means for operating said receptacle holder during the pauses of said conveyer.

3. In a pasteurizing apparatus, a pasteurizing chamber, a conveyer for conveying receptacles to be pasteurized, means for operating said conveyer intermittently, a receptacle holder rotatably mounted on said conveyer, said holder being provided with a receptacle seat having its axis extending radially to the axis of the holder, and means for rotating said holder during the pauses of said conveyer.

4. In pasteurizing apparatus, a conveyer, means for operating said conveyer intermittently, a receptacle holder mounted on said conveyer for relative movement, and means for operating said receptacle holder during the pauses of said conveyer.

5. In a pasteurizing apparatus, a pasteurizing chamber, a conveyer for conveying receptacles through said chamber, a receptacle holder, a cylindrical support mounted on said conveyer provided with an opening, a door for the opening of said support, said receptacle holder being rotatably mounted in said support and provided with a receptacle seat arranged to register with the opening thereof, and means for rotating said holder.

6. In a pasteurizing apparatus, a pasteurizing chamber, a conveyer for conveying receptacles through said chamber, a receptacle holder, a cylindrical support mounted on said conveyer provided with spaced openings, doors for the openings of said support,

removing surplus cement from said cementing roll, comprising a plate pivotally supported at one edge and having a scraper at its opposite edge arranged to rest by gravity on the upper portion thereof in advance of the point at which the work is pressed thereon by said presser roll, a vertically movable rod having a supporting arm on which the scraper-bearing portion of said plate rests and a screw for raising and lowering said rod whereby the distance between the scraper edge and the roll is uniformly varied and is held by gravity in operative position, substantially as described.

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

IRVING L. KEITH.

Witnesses:
L. H. HARRIMAN,
H. B. DAVIS.