(No Model.) 3 Sheets—Sheet 1.

C. SEIMEL.

CAN FILLING MACHINE.

No. 383,595. Patented May 29, 1888.

Fig. 1.

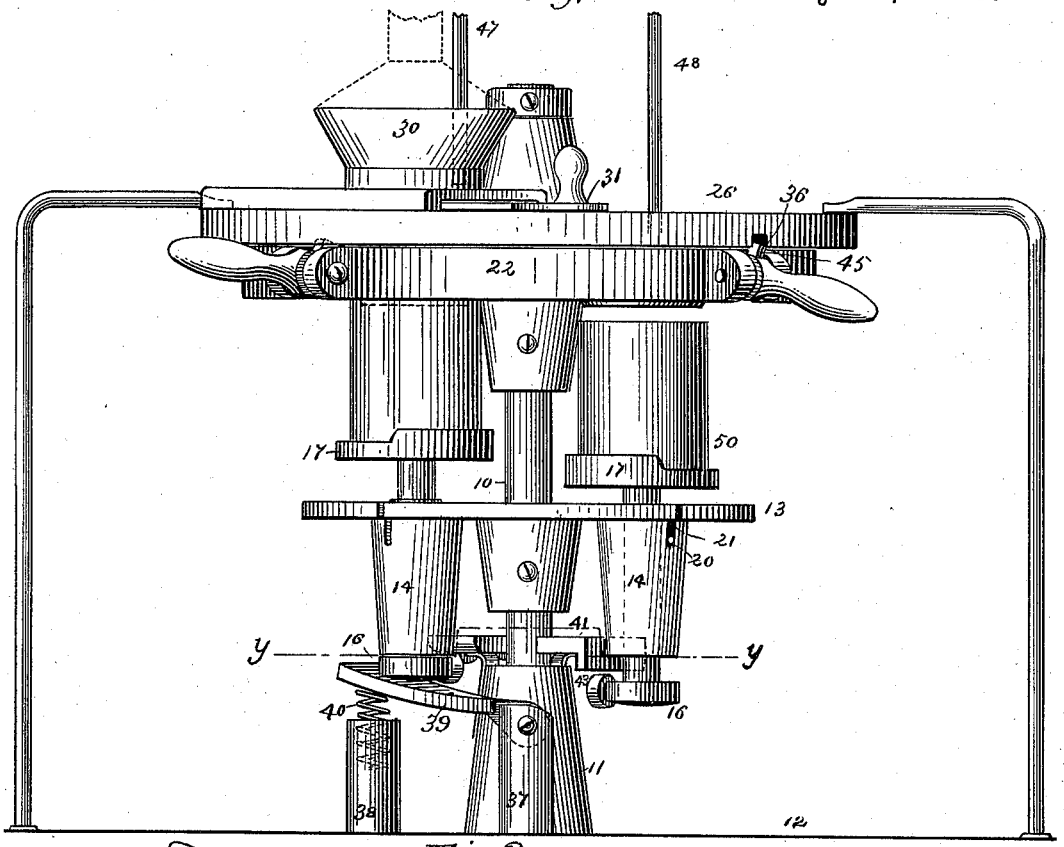
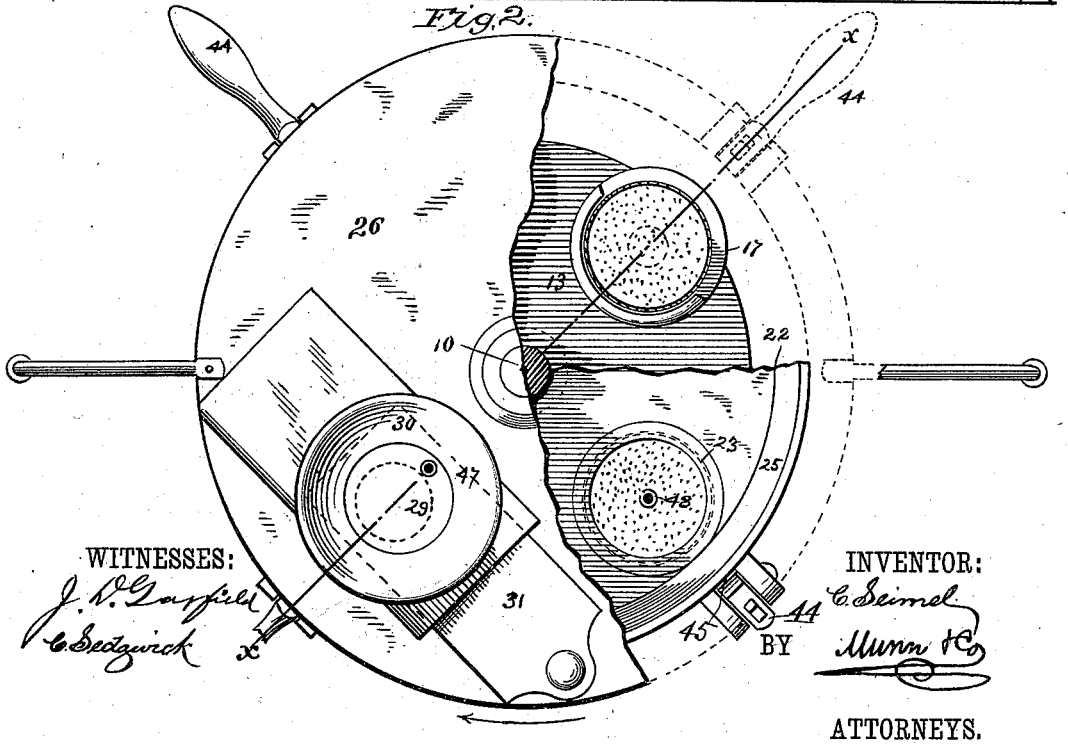


Fig. 2.



WITNESSES:

J. V. Garfield

C. Sedgwick

INVENTOR:

C. Seimel.

BY Munn & Co

ATTORNEYS.

(No Model.) 3 Sheets—Sheet 2.

C. SEIMEL.

CAN FILLING MACHINE.

No. 383,595. Patented May 29, 1888.

Fig. 3.

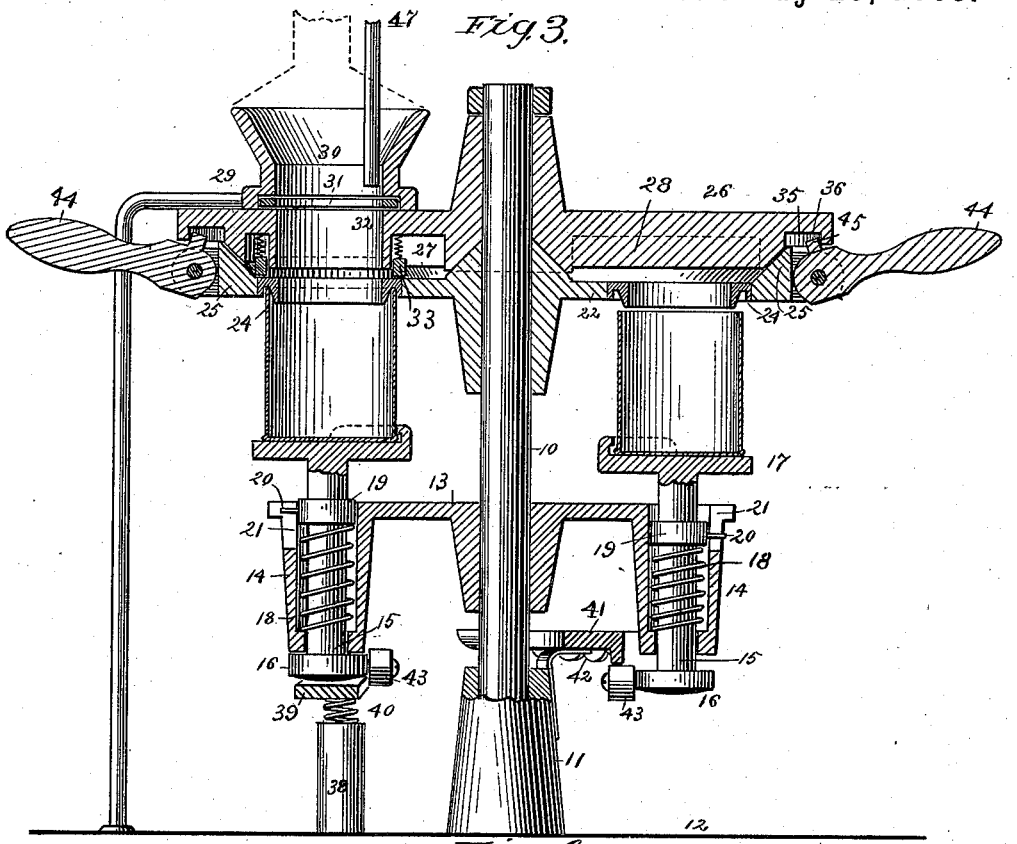
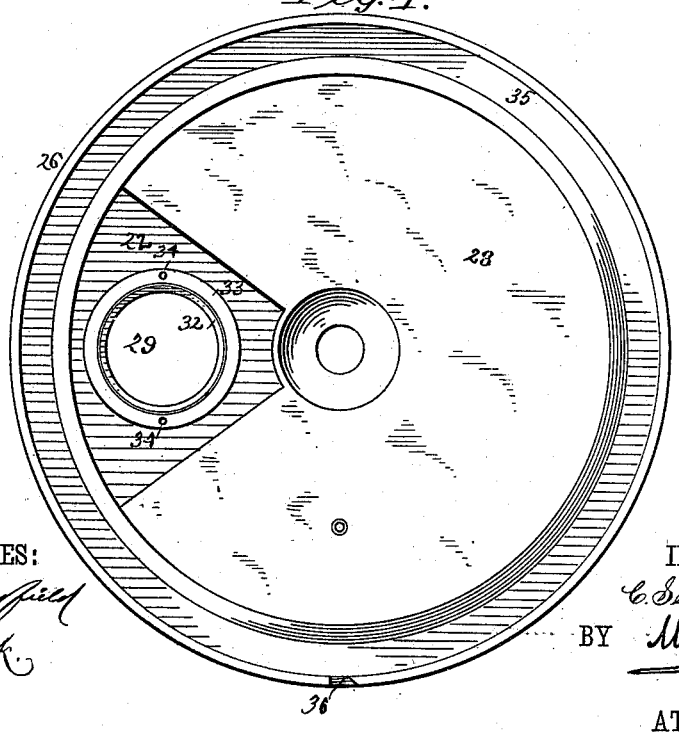


Fig. 4.



WITNESSES:

J. D. Garfield

C. Sedgwick.

INVENTOR:

C. Seimel.

BY Munn & Co

ATTORNEYS.

(No Model.) 3 Sheets—Sheet 3.

C. SEIMEL.

CAN FILLING MACHINE.

No. 383,595. Patented May 29, 1888.

Fig. 5.

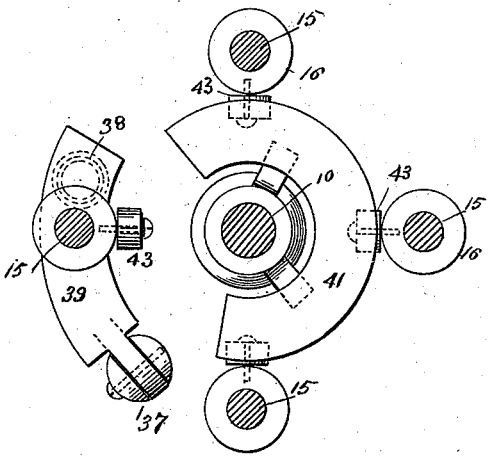


Fig. 6.

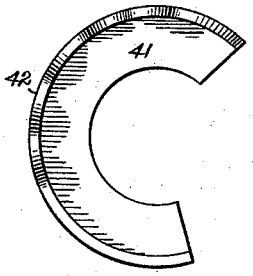
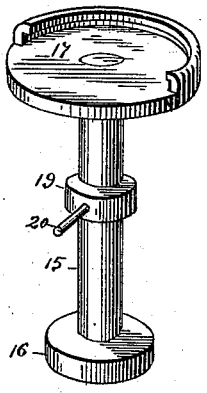


Fig. 7.



WITNESSES:

J. D. Garfield.

C. Sedgwick.

INVENTOR:

C. Seimel

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CONRAD SEIMEL, OF BROOKLYN, NEW YORK.

CAN-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 383,595, dated May 29, 1888.

Application filed February 25, 1888. Serial No. 265,260. (No model.)

To all whom it may concern:

Be it known that I, CONRAD SEIMEL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Can-Filling Machine, of which the following is a full, clear, and exact description.

My invention relates to an improvement in machines for filling cans, especially cans adapted to contain paris green, and has for its object to so fill the cans and shake down the contents thereof as that the dust will be effectually prevented from escaping, and the cans be of uniform weight.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, 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 of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the machine. Fig. 2 is a plan view partially broken away. Fig. 3 is a transverse section on line *x x* of Fig. 2. Fig. 4 is a bottom plan view of the top. Fig. 5 is a transverse section on line *y y* of Fig. 1. Fig. 6 is an under plan view of the shaking device, and Fig. 7 is a perspective view of a can-support.

In carrying out the invention, a spindle, 10, is perpendicularly held to revolve in suitable bearings, 11, secured to a base, 12. Upon the spindle, preferably slightly below the center, a disk, 13, is secured, provided near its periphery with a series of spaced apertures, and upon the under side, surrounding each aperture, a box, 14, is attached, having an opening through its bottom. A rod, 15, is passed into each of the boxes through the apertures in the disk, which rods, projecting through the boxes at the bottom, are provided at that point with a button, 16, preferably of a diameter equal to that of the boxes. To the upper end of each of the rods above the disks 13 a platform or table, 17, is secured, partially surrounded by a grooved flange conforming to the contour of the can and adapted to hold said can upon the table.

The normal height of the table 17 above the disk is controlled by a spring, 18, which has bearing upon the bottom of the box 14, and also upon a collar, 19, upon the rod 15. The table is prevented from turning and the flanged portion kept to the rear through a pin, 20, in the rod, sliding in a vertical slot, 21, cut through the periphery of the disk into the box.

Above the lower disk, 13, a second disk, 22, is secured to the spindle 10, provided with a series of openings, 23, one opening above each table. The apertures each receive a bushing or thimble, 24, grooved upon their under faces to form collars conforming to the shape of the top edges of the cans to be filled. (See Fig. 3.) These thimbles may be of different material from that of the disk 22. If desired, the collars may be formed integral with the disk 22.

The second disk, 22, is provided with a peripheral offset or flange, 25, upon the upper face, having preferably a beveled inner face.

The top 26 is rigidly supported from the base in any approved manner, and consists of an annular plate of greater diameter than the adjacent disk, 22, provided with a bearing for the spindle 10, and a recess, 27, upon the under face, in which recess a segmental block, 28, is attached; or, if found desirable, as shown in Fig. 4, the block may constitute an integral portion of the top plate.

The block 28 is of a suitable size to at all times cover all the openings in the upper disk with the exception of one.

An aperture, 29, is provided in the top, intervening the ends of the block 28, adapted to register with the opening in the disk 22 not covered by the block. Through this aperture 29 the paris-green or other material is supplied to the cans, and to that end is surrounded upon the upper surface of the top with a hopper, 30, which hopper is preferably continued up to the floor above. The amount of material allowed to pass through the aperture 29 may be regulated by a slide, 31, or in any other approved manner.

The aperture 29 is provided with a ring, 32, extending downward a sufficient distance to engage the surface surrounding the several apertures in the disk 22 as the two apertures are made to register.

The ring 32 is surrounded by a spring-actuated washer, 33, guided by vertical pins 34, attached to the top plate, 26, and passing through the washer. The object of the washer is to prevent the possible escape of dust when the material is being manipulated.

The under surface of the top or plate 26 is

provided with an annular approximately-peripheral groove, 35, the inner wall of which is beveled for contact with the beveled flange 25 of the disk 22, as shown in Fig. 3. The outer wall of the said groove 35 is of less height than the inner wall, and is flattened upon the face and provided with a notch, 36.

Upon the base in front of the machine two spaced posts, 37 and 38, are secured. In the top of the post 37 one end of a segmental track, 39, is pivoted, the other end of which track is made to rest upon a spring, 40, in the post 38, the spring being of sufficient height to at all times elevate the free end above the pivoted end, as shown in Fig. 1.

The height of the post 37 is such as that when the tables 17 are in their normal position the button 16 will enter in contact with the track, and the other or elevated end of the track is so positioned as to be reached by the button when the can is below the hopper.

Upon the reverse side of the machine from the track 39 a second inclined segmental track, 41, is rigidly secured, the highest end of which track is adjacent to the spring end of the track 39 and the lower end adjacent to the pivoted end of the same.

The under side of the track 41, from its highest nearly to the lowest end, is corrugated, as shown at 42 in Fig. 6. This corrugated surface is engaged by friction-rollers 43, horizontally pivoted upon the periphery of the buttons 16 almost immediately after said buttons have been released from the track 29, which rollers as they travel down the track impart a vibratory motion to the table, and likewise the can, shaking down the contents.

Opposite each aperture in the disk 22, upon the periphery thereof, a handle, 44, is pivoted, provided with an inner lug, 45, adapted to travel in the peripheral groove of the top plate. The object of the handles is to provide a means for revolving the disks, whereby at each quarter-revolution of the disks a can is brought in position to be filled and one to be removed. When this quarter-revolution is made, the fact will be announced by the lug upon the handle entering the peripheral slot in the top plate and preventing further revolution until released.

Two off-take pipes, 47 and 48, are provided, leading upward out of the room—one from over the slide in the chute and the other from over the filled can ready for removal—the object of the pipes being one to convey air into the chute or hopper to permit the ready flow of the material into the can and the other for the escape of any dust yet lingering around the can when in position for removal.

In operation, a can is placed upon the table at 50, the handle 44 grasped, carried upward, and drawn forward until the next handle has engaged. This movement causes the button of that particular table carrying the empty can to travel up the inclined track 39, which, when the upper end is reached, has so elevated the table as that the upper edge of the can has been entered over the collar surrounding the aperture in the disk 22 above the can. The slide is now drawn, the can filled, and the slide closed. As more powder is contained in the aperture of the disk 22 than will without packing be held by the can, at the next revolution of the disk bringing an empty can to be filled the friction-roller belonging to that table carrying the filled can enters upon the corrugated track, and in its passage down the same shakes the powder down in the can. As the disk revolves, the can gradually leaves the collar upon the disk 22 until, when the starting-point is regained, it has entirely left it, and may be removed and another can substituted, the loose dust, if any, passing off through the pipe 48.

It will thus be observed that the cans can be filled as rapidly as they can be placed upon the table and the disks revolved without the possibility of any dust escaping, which, when paris-green is to be canned, greatly affects the health of the operators.

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

1. In a can-filling machine, the combination, with a central spindle and a fixed top, of a lower disk secured to said spindle, provided with a series of spring-actuated can-carrying tables, an upper disk apertured in alignment with the tables, having downwardly-projecting collars surrounding said apertures, a delivery-chute attached to the top, registering with the consecutive apertures in the upper disk, and means for gradually elevating the tables, as and for the purpose specified.

2. In a can-filling machine, the combination, with a central spindle and a fixed top, of a lower disk secured to said spindle, provided with a series of can-carrying tables having spring-actuated rods projecting downward from said tables, an upper disk apertured in alignment with the tables and having downwardly-projecting collars surrounding said apertures, a delivery-chute attached to the top and registering with the consecutive aperture in the upper disk, and means for gradually elevating the tables, as and for the purpose specified.

3. In a can-filling machine, the combination, with a central spindle and a fixed top provided with a feed-aperture and a chute surrounding said aperture, of a lower disk secured to said spindle, provided with a series of can-carrying tables having spring-actuated rods projecting downward from said tables, an upper disk also secured to the spindle and apertured in alignment with the tables, and also having downwardly-projecting collars, the said apertures adapted to consecutively register with the feed-aperture, and means for gradually elevating the tables and vibrating the same, substantially as shown and described.

4. In a can-filling machine, the combination, with a central spindle and a fixed top provided with a feed-aperture, a chute leading

into said aperture, and a spring-actuated packing-ring below the same, of an apertured lower disk secured to said spindle, flanged can-carrying tables secured to spring-actuated rods, an upper disk also secured to the spindle, apertured in alignment with the tables, and having downwardly-projecting collars adapted to consecutively register with the feed-apertures, means for gradually elevating the tables, and means for gradually lowering and vibrating the same, substantially as shown and described.

5. In a can-filling machine, the combination, with a central spindle and a fixed top provided with a feed-aperture, a chute leading into said aperture, and a spring-actuated packing-ring below the same, of a lower disk secured to said spindle, vertically-reciprocating spring-actuated rods held in said disk and provided with flanged can-carrying tables secured to the upper end of said rods, said rods having a button and a friction-roller secured to their lower ends, an upper disk also secured to the spindle, apertured in alignment with the table, and having downwardly-projecting collars, and oppositely-arranged tracks, one plain and the other corrugated, adapted to be respectively engaged by the buttons and rollers to elevate and vibrate the tables, substantially as and for the purpose specified.

6. In a can-filling machine, the combination, with a central spindle and a fixed top provided with a feed-aperture, a chute leading into said aperture, and a spring-actuated packing-ring below the same, of a lower disk secured to said spindle, vertically-reciprocating spring-actuated rods held in said disk and provided with flanged can-carrying tables secured to the upper ends of said rods, a button and a friction-roller secured to their lower ends, an upper disk also secured to the spindle, apertured in alignment with the table, having downwardly-projecting collars, and oppositely-arranged tracks, one plain and the other corrugated, adapted to be respectively engaged by the buttons and rollers to elevate and vibrate the tables, the plain track being pivoted at one end and upheld by a spring at the other, substantially as and for the purpose specified.

CONRAD SEIMEL.

Witnesses:
J. F. ACKER, Jr.,
C. SEDGWICK.