

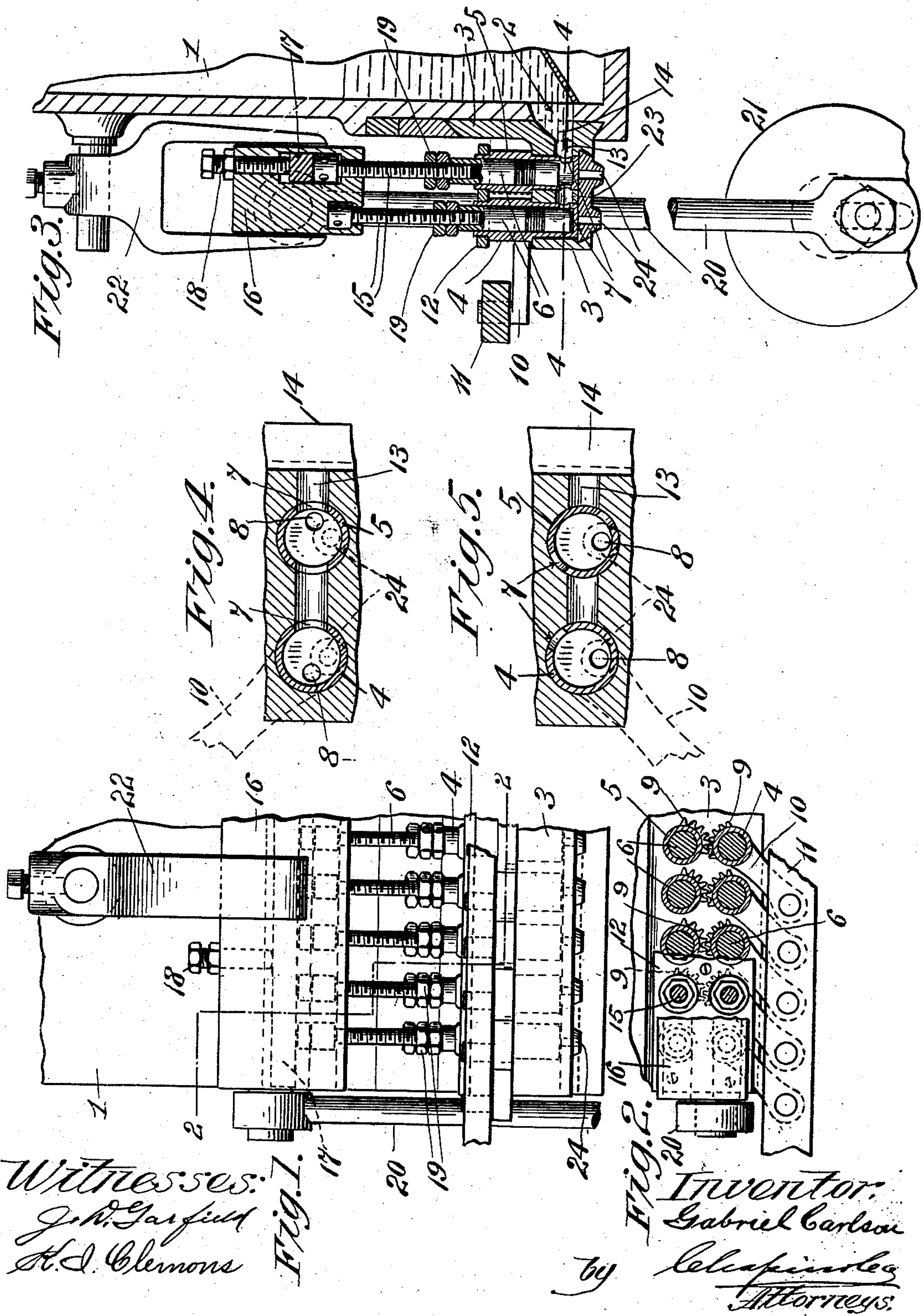
No. 712,649.

Patented Nov. 4, 1902.

G. CARLSON.
CONFECTIONERY DEPOSITING MACHINE.

(Application filed Sept. 30, 1901.)

(No Model.)



Witnesses:
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Fig. 1.

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UNITED STATES PATENT OFFICE.

GABRIEL CARLSON, OF SPRINGFIELD, MASSACHUSETTS.

CONFECTIONERY-DEPOSITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 712,649, dated November 4, 1902.

Application filed September 30, 1901. Serial No. 77,060. (No model.)

To all whom it may concern:

Be it known that I, GABRIEL CARLSON, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Confectionery-Depositing Machines, of which the following is a specification.

This invention relates to confectionery-machines, and has special reference to depositing-machines, and is in the nature of an improvement on the invention forming the subject-matter of my prior patent for a depositing-machine dated October 30, 1900, and numbered 661,008. In my said patent means are described for depositing confectionery material in two rows of molds simultaneously from one cylinder, and a modification of the construction is described consisting of two separate cylinders, one for each row of molds, operable together and actuated by separate mechanisms. It has been found in practice that there are certain objections to the constructions embodied in said prior patent. For example, the feed of material through each of the two ports in the cylinder would not be always uniform on all classes of material, and in the two-cylinder construction certain closeness of timing of the separate actuating mechanisms of the cylinder has presented difficulties in practice.

It is the object of the present invention to overcome these objections; and to that end the invention consists in a double row of cylinders in one cylinder-bar geared together and rotatable in said bar to open and close the ports communicating with the supply-tank and to open and close the outlet-ports, both cylinders being rotated by one actuating mechanism, there being adjusting means for the pistons, all as more fully described in the following specification and clearly pointed out in the claims.

In the drawings, Figure 1 is a front elevation of a part of a depositing-machine embodying the invention. Fig. 2 is a sectional plan view in different planes following the line 2 2, Fig. 1. Fig. 3 is a sectional side elevation of Fig. 1. Fig. 4 is a sectional plan view through a pair of cylinders on line 4 4, Fig. 1, showing the latter in one position; and

Fig. 5 is a similar view showing the cylinders in another position.

Referring to the drawings, 1 indicates a portion of a supply-tank for the liquid confectionery material, and it may be of a type usually employed in machines of this class. It is provided along its lower front edge with a narrow slit 2. (Seen in section in Fig. 3.) A cylinder-bar 3 is secured to the front of the supply-tank in such position that the cylinders supported therein may receive material from the supply-tank through ports registering with the slit 2 in said tank. These cylinders are arranged in the bar 3 in two rows, one in front of the other, the supply of material for the front row passing through the cylinders of the rear row under the pistons of the latter. The front-row cylinders are indicated by 4, those of the rear row by 5, the pistons of both by 6, and the intake-ports in the cylinders by 7. These cylinders are shells the lower end of which is closed, and in said closed end is the outlet-port 8. The contiguous sides of the front and rear cylinders are provided with segmental gears 9, whereby the rotation of one will effect a rotation in like degree of the other. On each of the cylinders of the front row there is an arm 10, projecting outwardly therefrom and preferably cast thereon, and a connecting-bar 11 has a pivotal engagement with each of the arms 10, whereby the endwise movement of said bar will rotate the cylinders. This bar 11 is reciprocated endwise at the proper times by a cam, (not shown in the drawings,) but it may be similar to the one shown in my said prior patent. A flat bar 12, secured at each end thereof to the cylinder-bar, is provided with suitably placed holes to receive the upper ends of the cylinders, as shown in Fig. 3, whereby the latter are rotatably supported in proper relation one to the other. The ports in the cylinder-bar, through which communication is established with the slit 2 of the supply-tank, are indicated by 13. The back side of the cylinder-bar has a groove 14 therein, (see Figs. 3, 4, and 5,) which registers with the slit 2, the ports 13 being bored through the bar into the cylinders from the bottom of this groove.

Each cylinder is provided with a piston 6, into the upper end of which is screwed a pis-

ton-rod 15, having a head thereon which enters two T-slots in the cross-head 16. In that slot, located over the front row of cylinders, the head of the piston-rod may fit closely; but the slot over the rear row is made deep enough to permit the vertical adjustment of the piston-rods, whereby the pistons of that row may be raised in their cylinders to uncover more or less the ports 7 therein to permit confectionery material from the supply-tank to flow through the rear cylinder and cover the intake-port of the front cylinder, to the end that upon the beginning of the upstroke of the pistons material may be taken into each cylinder simultaneously. Obviously a larger quantity will be contained in the rear cylinders at the end of the upstroke of the cross-head 16, but as the stroke of the front and rear pistons is the same the quantity expelled on the downstroke will be the same. To provide for the uniform adjustment of each of the rear pistons, a bar 17 is introduced in the slot over the heads of the piston-rods, and adjusting-screws 18 in the top of the cross-head bear on said bar 17, the piston-rods being screwed up against the under side thereof. The adjustment of the pistons on the piston-rods is effected by turning one relative to the other and locking them together by the set-nuts 19 on the piston-rods.

While the above-described method of adjustment is the preferred method, because of the ease with which a uniform adjustment of all the pistons may be effected, it is possible to provide a fixed engagement between the heads of the rear pistons and the cross-head the same as is provided for the pistons of the front row and then effect the vertical adjustment of the rear pistons by screwing the cylinders up or down on the piston-rods.

The cross-head has imparted to it vertical reciprocating movements by means of connecting-rod 20, operated by a connection with a crank 21, substantially as described in my said prior patent, said cross-head being supported in suitable guides 22.

When the cylinder-bar is bored out for the reception of the cylinders, the holes are bored entirely through the bar, and the bottom of the latter is provided with two undercut grooves running along each of the two long sides thereof to receive a nipple-bar 23, provided with nipples 24, which are perforated to register with the outlet-ports 8 of the cylinders when the latter are rotated to cut off the communication thereof with the supply-tank

between the up and the down strokes of the pistons. Said nipples are located eccentrically of the cylinders, and the ports 8 are correspondingly offset from the center of the cylinders to permit their registration with said nipple, as described.

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

1. In a depositing-machine two contiguous rows of cylinders rotatably mounted in a cylinder-bar, means for rotating the cylinders of one of said two rows, and connections between the cylinders of said two rows whereby the rotation of one of the latter will effect the rotation of the other, substantially as described.

2. In a depositing-machine two contiguous, axially-parallel rows of rotatable cylinders, pistons in the cylinders, a cross-head with which said pistons are adjustably connected, and means for rotating the cylinders, substantially as set forth.

3. In a depositing-machine, a cylinder-bar, two parallel rows of cylinders therein, an inlet-port in said bar communicating with one of said cylinders through the other, substantially as described.

4. In a depositing-machine, two rows of rotatable cylinders gear connections between said rows whereby the rotation of one may rotate the other, nipples located in proximity to the bottom ends of the cylinders, having apertures therein, said cylinders, having outlet-ports therein for registering with said nipple-apertures, when the cylinders are rotated in one direction, substantially as set forth.

5. In a depositing-machine, two parallel rows of cylinders, rotatably supported, connections between them, whereby they may rotate as one: a supply-tank, and inlet-ports in said cylinders in communication with said tank: an outlet-port in each of said cylinders, and means for rotating the latter, whereby when an inlet-port is closed an outlet-port will be opened, and vice versa, combined with mechanism for drawing confectionery material into said cylinders from the supply-tank, and for expelling it therefrom through said outlet-ports, substantially as described.

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Witnesses:

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