

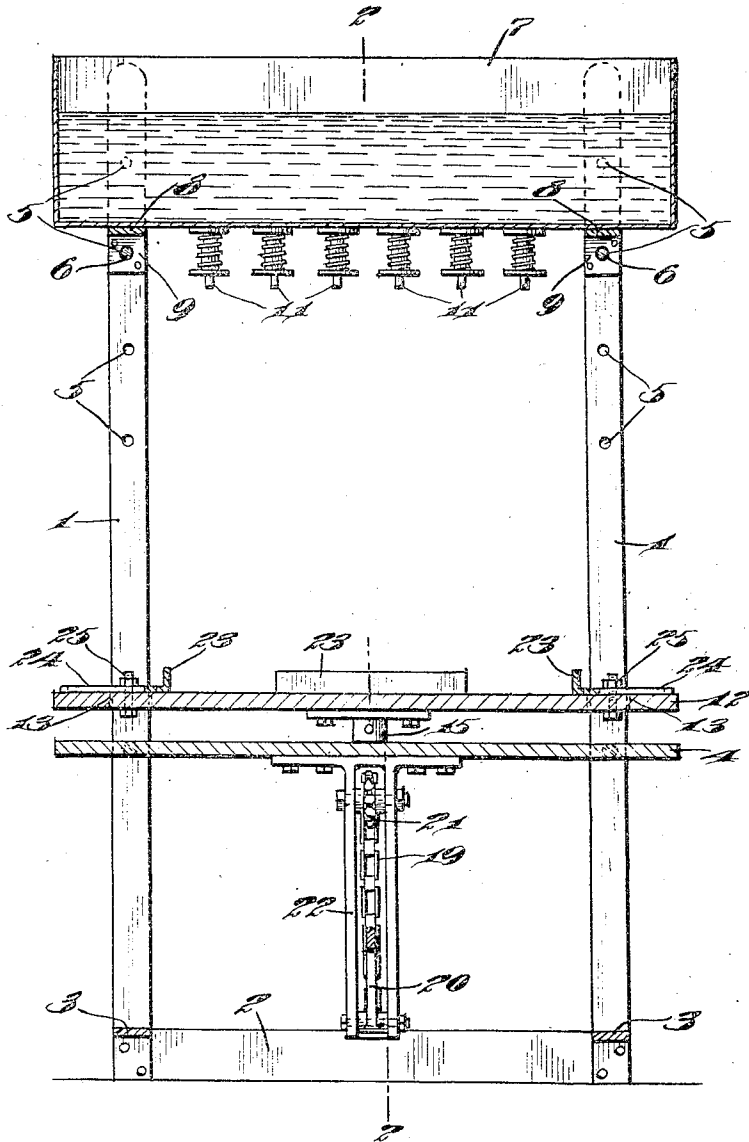
C. STOCKTON.
BOTTLE FILLING MACHINE.
APPLICATION FILED JAN. 19, 1910.

1,048,909.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Thos. Creamer
R. H. Frenkel

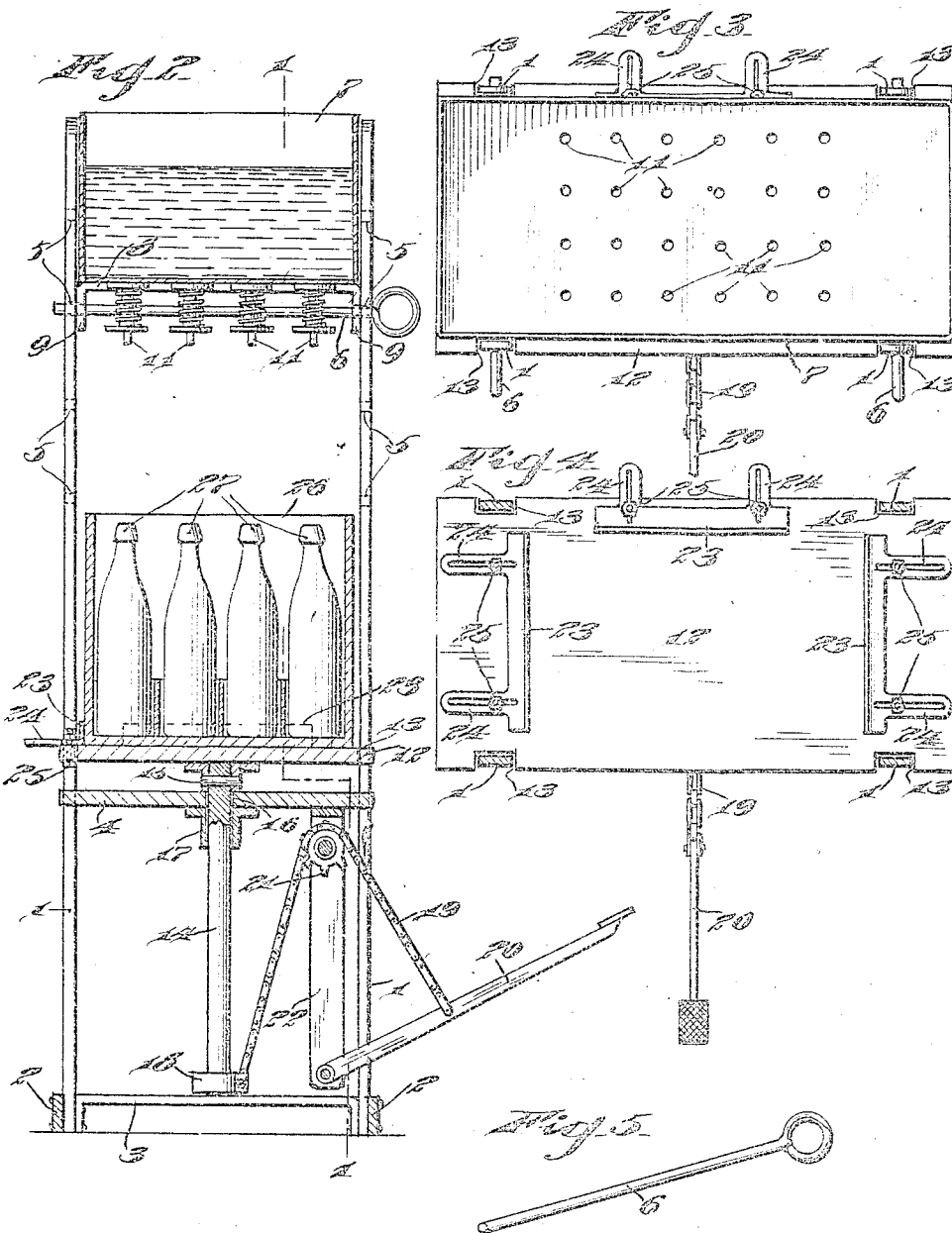
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES STOCKTON, OF PHILADELPHIA, PENNSYLVANIA.

BOTTLE-FILLING MACHINE.

1,048,909.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed January 19, 1910. Serial No. 538,915.

To all whom it may concern:

Be it known that I, CHARLES STOCKTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Bottle-Filling Machines, of which the following is a specification.

My invention relates to improvements in bottle filling machines, the object of the invention being to provide an improved apparatus of this character in which a crate full of bottles may be simultaneously filled and in which the crate with the bottles therein may be elevated to the supply nozzles, which latter may be automatically opened by the elevation of the bottles and automatically closed when the bottles are filled and lowered.

A further object is to provide an improved vertically movable platform, improved mounting therefor, and improved means for operating the same.

A further object is to provide improved mounting for the liquid supply tank in the upper portion of an improved frame work, whereby the tank may be vertically adjusted in accordance with the height of the bottles to be filled, and provide improved guides on the platform whereby the bottles in a crate may be positioned in line with the supply nozzles above.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings: Figure 1 is a view in vertical longitudinal section on the line 1—1 of Fig. 2. Fig. 2 is a view in vertical cross section on the line 2—2 of Fig. 1. Fig. 3 is a top plan view. Fig. 4 is a view in cross section showing the bottle supporting platform in plan, and Fig. 5 is a detailed perspective view of one of the tank supporting rods.

The supporting frame work of my improved structure comprises four upright bars 1 secured together at their lower ends by means of longitudinal bars 2 and transverse bars 3, and also secured to a stationary platform 4 located an appreciable distance above the lower end of the frame and supported by means of the uprights 1.

The uprights, which are preferably of

flat metal as shown, are provided in their upper portions with a plurality of openings 5 to receive in any of them transverse rods 6. These rods 6 are adapted to support a liquid supply tank 7, and said tank has secured to its lower face transverse bars 8, the latter having downwardly bent ends 9, perforated to receive rods 6, and these bars 8 may be positioned so that the perforations therein register with any of the perforations 5, and thereby adjust the tank 7 vertically in accordance with the height of the bottles to be filled. The bottom of this tank 7 is provided with a plurality of spring pressed nozzles 11. These spring pressed nozzles are of the ordinary type and are adapted when pressed upward to open and when permitted to be moved downward by their springs to close, and as I do not claim any feature of these nozzles as my invention, it is not necessary to describe them in detail.

12 represents a horizontal, vertically movable platform which is provided at its edges with notches 13 to receive uprights or standards 1, and this platform 12 is therefore guided in its vertical movement by the standards 1, and is also guided, in its vertical movement, by means of a plunger 14, which is secured in a collar 15 on the lower face of platform 12 at the center of the latter and extends through an opening 16 in platform 4 and through a sleeve or collar 17 on the platform 4, and is adapted to move vertically through said opening and collar. A block or head 18 is secured to the lower end of plunger 14 and is connected by a chain 19 with a treadle or foot lever 20. This chain 19 is passed over a sprocket wheel 21, which is mounted to turn in a bracket 22 depending from platform 4, and the foot lever or treadle 20 above referred to, is pivotally secured at its inner end to the lower end of this bracket 22.

In order to permit crates of various sizes to be supported on the platform 12 and be guided into such position that the bottles therein will register with the nozzles 11, I provide on platform 12 three guides 23. These guides each comprise angle irons disposed on the platform and having slotted extensions 24 to receive locking screws or bolts 25 on the platform to permit adjustment of these guides in accordance with the size of the crate. Two of these guides are disposed parallel as shown, and the third

forms an abutment to limit the inward sliding movement of the crate. The crate is illustrated at 26 and 27 represents bottles to be filled.

5 The operation is as follows: A crate containing empty bottles is placed upon platform 12 and slid into position between the guides 23. The operator then depresses treadle or foot lever 20, which through the medium of chain 19 and plunger 14 elevates platform 12 and moves the bottles into engagement with the spring pressed nozzles 11. A continued upward movement of the bottles against the action of the spring nozzles will cause the valves in the nozzles to open and permit the liquid from tank 7 to flow into the bottles. When the bottles are filled, the operator merely releases pressure on foot lever or treadle 20 allowing the platform to descend. The nozzles 11 automatically close and when the platform is lowered to normal position, the crate with filled bottles is removed and a crate with empty bottles replaces the same.

25 It will therefore be noted that with my improvements an entire crate of bottles may be quickly and easily filled, and requires but slight effort on the part of the operator. If the bottles are unusually high or unusually low and require too great a movement on the part of the foot lever 20 to bring them into engagement with the nozzles 11, tank 7 may be vertically adjusted in the frame work as above explained.

35 Various slight changes might be made in

the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

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

45 In a bottle filling machine, the combination with a base, uprights on the base, a tank supported on the upper ends of the uprights, depending nozzles on the tank, an elevator having notched front and rear edges movable on the uprights, a platform secured to the uprights below the elevator and having a central opening, a plunger secured to the elevator and projecting downwardly through the platform, a bracket secured to the platform and depending therefrom, a lever pivotally connected at one end to the lower end of the bracket, a sprocket wheel supported on the bracket near its upper end, and a sprocket chain connecting the lower end of the plunger with the lever and engaged over the sprocket wheel, substantially as described.

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

CHARLES STOCKTON.

Witnesses:

R. H. KRENKEL,
CHAS. E. POTTS.