

(No Model.)

R. R. STONE.
BOTTLE FILLING DEVICE.

No. 339,709.

Patented Apr. 13, 1886.

Fig. 1.

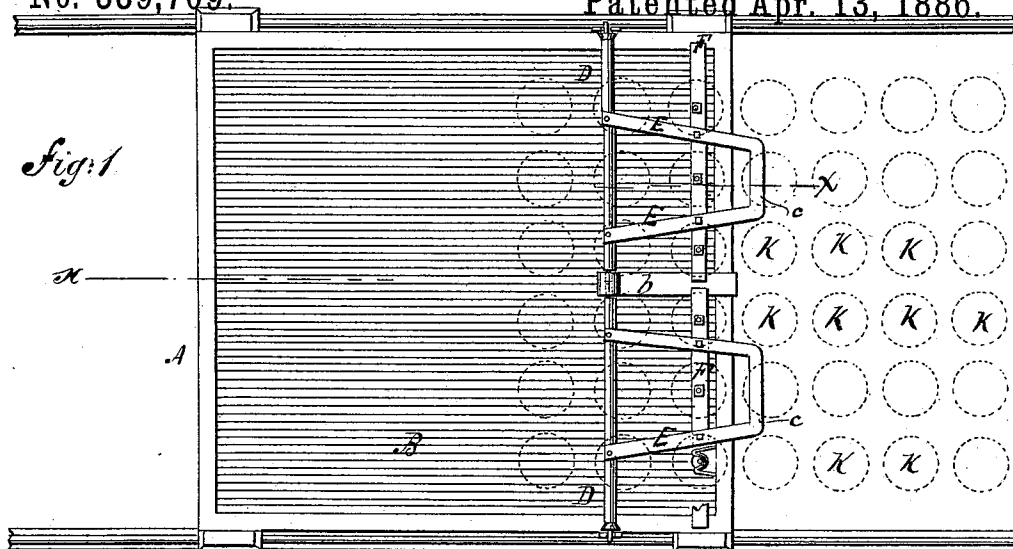


Fig. 2.

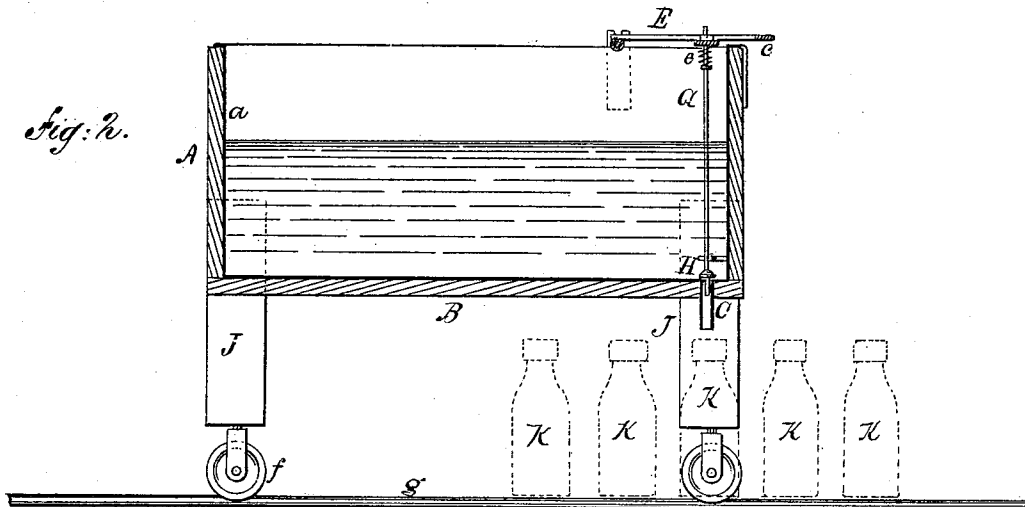
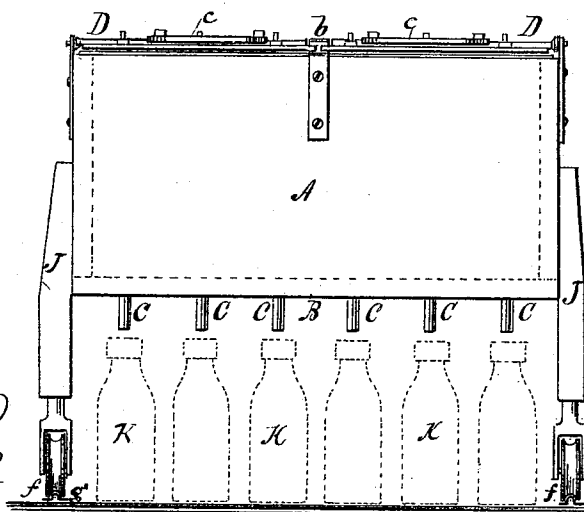


Fig. 3.



WITNESSES

Chas. Nida
D. A. Carpenter

INVENTOR

Ruben R. Stone

By *his* Attorney

UNITED STATES PATENT OFFICE.

REUBEN R. STONE, OF NEW YORK, N. Y.

BOTTLE-FILLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 339,709, dated April 13, 1886.

Application filed March 17, 1885. Serial No. 159,166. (No model.)

To all whom it may concern:

Be it known that I, REUBEN R. STONE, of the city, county, and State of New York, a citizen of the United States, have invented a new and useful Improvement in Bottle-Filling Machines; and I declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, forming part of this specification.

This invention is in the nature of an improvement in devices for filling bottles with milk or other fluids; and the invention consists in a bottle-filling device constructed in the manner particularly shown, described, and claimed.

In the accompanying sheet of drawings, Figure 1 represents a plan or top view of my bottle-filling device; Fig. 2, a section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a front end view.

Similar letters of reference indicate like parts in the several figures.

The purpose of this invention is to supply a simple and efficacious means for filling bottles with milk and other fluids where great numbers of bottles are required to be filled and filled expeditiously and often, as is the case with bottles in which milk is regularly served to customers.

The ordinary process of filling by hand, either with or without any funnel, is slow, and results in more or less loss of fluid from misdirected streams and overflow. To obviate these objections and to meet all necessary requirements, I construct my device for filling bottles of, first, a suitable-sized receptacle, A, which may be made of wood and lined, as at *a*, or be made throughout of metal, and, preferably, with its bottom B declining somewhat from back to front. Through the bottom B, and near its front and extending transversely, are formed a series of cylindrical openings, each of which is fitted with a tube, C, this tube having its upper end flush with the inner surface of the bottom B and protruding downward, as shown in Figs. 2 and 3.

To the upper edges of the box or cistern A, also near its front, are journaled transversely one or more shafts, D. This shaft may be continuous from side to side of the cistern; or it may consist of two shafts, with their inner ends journaled, as at *b*, Figs. 1 and 3. To these

shafts D are rigidly fixed supporting-irons E, and to these supporting-irons are fixed bars F, the supporting-irons E extending beyond the front end of the cistern A, as at *c*, Figs. 4 and 2.

To the bars F are secured the upper ends of valve-stems G, with spiral springs *e* interposed between the under side of the bars F and a collar formed on the valve-stems G. The lower ends of the valve-stems G are provided with valves H, which may or may not be packed with rubber, but which should in some way be made to accurately close the upper ends or mouths of the tubes C.

To the under side of the cistern A are fixed supports J, with rollers *f*, pivoted to their lower ends. These rollers have a grooved periphery and rest upon tracks *g*, and the supports, rollers, and track elevate the cistern to a height that will enable the bottles K to be conveniently placed beneath the tubes C of the cistern.

Now, when my filling apparatus has been constructed substantially in the manner hereinbefore described, it is operated by placing the empty bottles on a table or other convenient place in parallel rows, each row containing as many bottles as there are tubes C in the cistern, charging the cistern with milk or such other fluid as it is desired to bottle, rolling the cistern on its track *g* until the tubes C are immediately over the mouths of the first row of bottles, when, by raising the supporting-irons E by their projecting parts *c*, the valve-stems G carry upward the valves H and permit the fluid to flow from the cistern through the tubes C, directly into the bottles beneath them. The first row of bottles being in this way filled simultaneously, the tubes C are closed by lowering the irons E, and they are kept in a closed position by the operation of the springs *e*. The cistern is now rolled to the next row of bottles, which is filled in like manner, and so on until the cistern is exhausted or the supply of bottles filled. In this way, as is obvious, a great number of bottles may be filled with celerity and uniformity.

While this device is particularly applicable to filling milk-bottles, it may be used for filling bottles with liquors, oils, sirups, &c., with equal facility.

The purpose of making the bottom of the

cistern inclined is to the more effectually drain the same.

I am aware that it is not new to provide a bottle-filling apparatus with a number of valvular outlets, so as to fill a number of vessels simultaneously.

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

10 The herein-described bottle-filling apparatus, consisting of the tank A, mounted on the rollers *f*, and having the inclined bottom B,

the outlets C in the lowermost end of said tank, the valves H, co-operating with said outlets, the valve-stems G, the valve-stem-op- 15 erating irons E F, pivoted to the shaft or shafts D, with interposed springs, and the handle-like extensions *c* of the irons E, the construction and arrangement being and operating substantially as shown and described.

REUBEN R. STONE.

In presence of—

G. W. PLYMPTON,
D. A. CARPENTER.