

(Model.)

2 Sheets—Sheet 1.

J. GULDEN.
MUSTARD FILLER.

No. 260,385.

Patented July 4, 1882.

Fig: 1

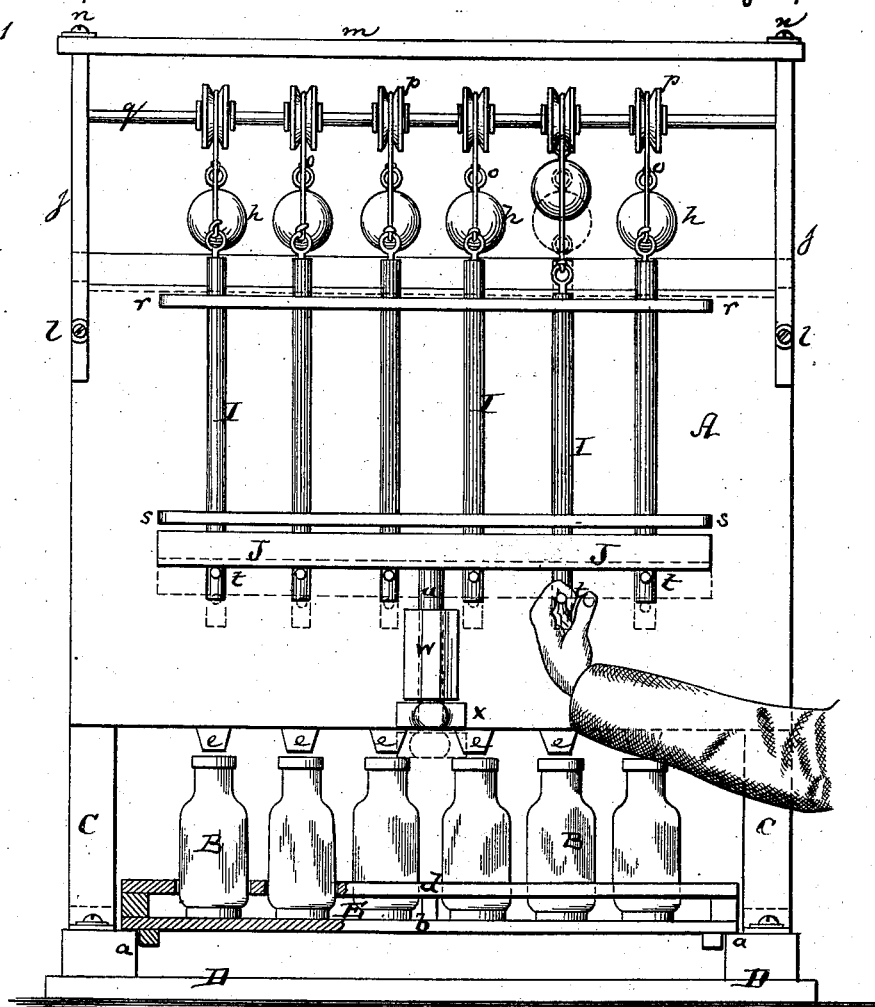
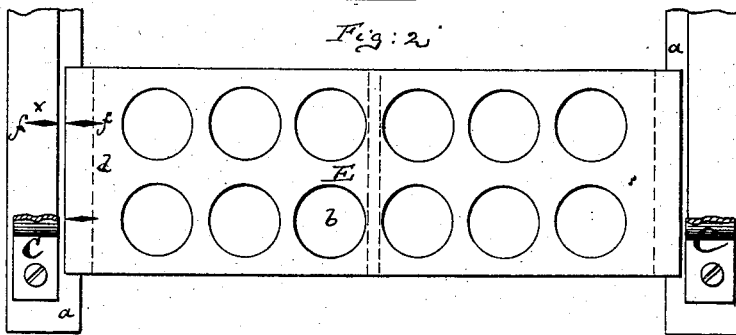


Fig: 2



Witnesses:
Henry F. Parker,
John C. Tunbridge

Inventor:
Jacob Gulden
by his attorneys
Brice & Betts

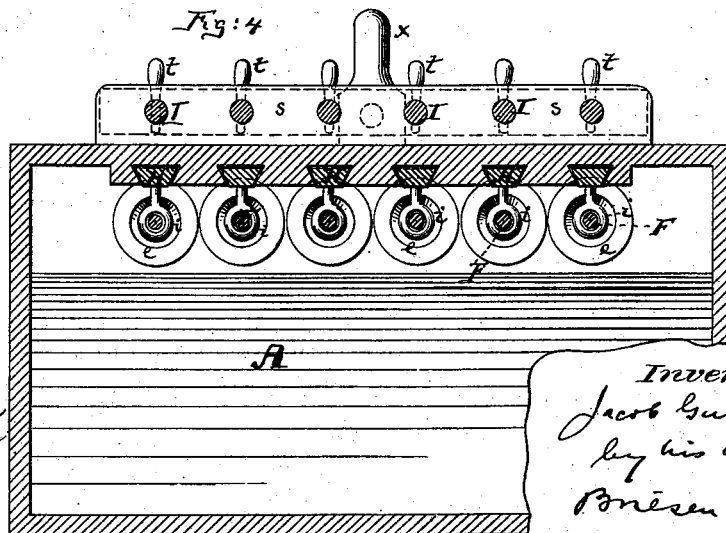
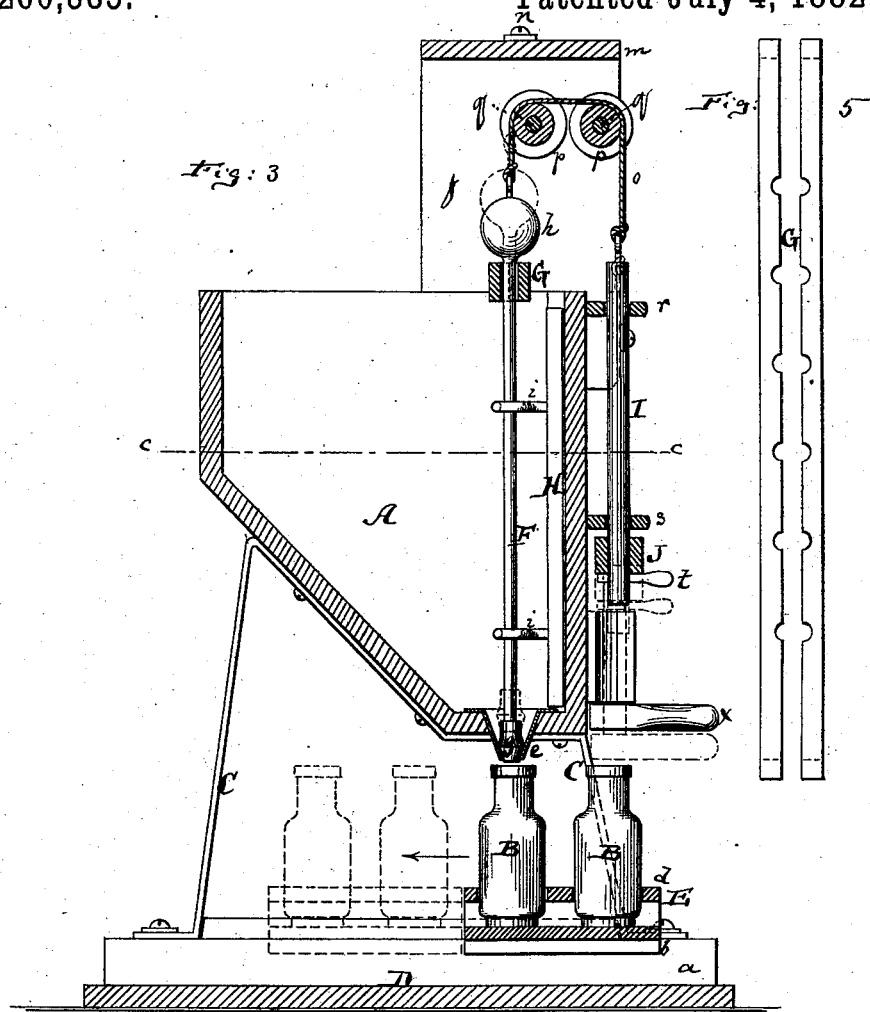
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UNITED STATES PATENT OFFICE.

JACOB GULDEN, OF NEW YORK, N. Y.

MUSTARD-FILLER.

SPECIFICATION forming part of Letters Patent No. 260,385, dated July 4, 1882.

Application filed April 1, 1882. (Model.)

To all whom it may concern:

Be it known that I, JACOB GULDEN, of New York, in the county and State of New York, have invented a new and Improved Mustard-Filler, of which the following is a specification.

Figure 1 is a front elevation of my improved mustard-filler; Fig. 2, a top view of the bottle-holder. Fig. 3 is a vertical cross-section of the mustard-filler; Fig. 4, a horizontal section of the same on the plane of the line *c c*, Fig 3; and Fig. 5 is a detail top view of the upper guide-bar for the valve-rods.

The object of this invention is to produce a machine for filling a number of mustard-bottles at the same time, so as to avoid the necessity of filling each bottle separately, and overcome the difficulty heretofore experienced of keeping mustard perfectly clean and pure in the vessel from which it has to be filled into the bottle.

Heretofore mustard was filled into bottles from cans having long spouts, the attendant lifting the can, holding it, and pouring the contents into one bottle, and then into another bottle, &c. Meanwhile the spout and can would become covered with mustard that had been exposed to the air, and would become clogged more or less, and the operation would proceed with less speed and satisfaction. Unskilled attendants would frequently cause the bottle to overflow, causing more labor in cleaning than was involved in the mere act of filling. In my improved apparatus the mustard is contained in a tank, which has a series of outlets at or near the bottom and a series of valves closing these outlets, and which is provided with means for lifting all these valves, at the same time allowing bottles standing under the respective outlets to be filled simultaneously, the mechanism being such that if, when some of the series of bottles are filled, one or more bottles should not be properly filled, the attendant can nevertheless allow the surplus needed to flow into the bottles that are not entirely filled without causing the remaining bottles to overflow; and, moreover, the mechanism is of such construction that, after a tank full of mustard has been emptied into bottles, it can be readily cleaned and all its parts taken out and washed.

The invention consists in the novel arrange-

ment and combination of parts hereinafter more fully specified.

In the drawings, the letter A represents the tank which is to contain the mustard that is to be filled into bottles B B. The tank A is supported on a suitable framing, C, so as to be raised above the bed D of the apparatus, which bed has rails *a*, on which slides the rack E, that holds the bottles B.

The rack E is composed of a lower board, *b*, on which the bottles stand, and of an upper perforated board, *d*, by which the bottles are guided and spaced, as indicated in Figs. 2 and 3. Each rack may have one row of six (more or less) holes in the board *d* to receive six (more or less) bottles B, or it may have more than one such row, if desired, two rows being shown in Fig. 2.

The rack E is supported on the rails *a*, and can be moved on these rails so as to bring a row of bottles beneath the discharge-openings of the tank A. These discharge-openings are preferably downwardly-extending funnel-shaped spouts *e*, one of which is clearly shown in Fig. 3, all arranged in a row corresponding with a row of holes in the board *d* of the rack E, so that when the rack is properly placed (to which end a suitable gage, marked *f*, is on the rack, and a corresponding gage, *f*^x, on the bed D) the bottles of one row are all respectively beneath the respective spouts *e*, as shown in Fig. 1. Each of these spouts *e* is closed from above by a rubber plug, *g*, which plug is attached to the lower end of a vertical rod, F, there being as many rods F F as there are discharge-openings *e* in the tank. The rods F carry weights *h* at or near their upper ends, preferably—that is to say, above the mustard in the tank; or they may be pressed down by means of springs, if desired; and I desire it understood that springs are to be regarded as the equivalents of the weights for holding the rods F and the plugs *g* down to close the discharge-openings *e*.

The several rods F F are kept vertically within the tank A by being guided in eyes *i i*, that extend into the tank A, and by being further guided in a top board, G, which is placed over the tank A, as shown. The eyes *i i* for each rod F are (or if there be but one eye *i* for each rod F that eye is) attached to a vertically-

movable rod, H, which is dovetailed into the inner face of the tank A, as clearly shown in Fig. 4. The upper guide-board, G, which rests on top of the tank A, is made in two parts, as shown in Fig. 5, the two parts being, when they are on the tank, contiguous, except where they form openings for the rods F. This bar G is held down onto the top of the tank by upwardly-extending posts *j*, which are fastened to the tank A by screws *l*, and which are connected at their upper ends by a cross-board, *m*, that is fastened to the posts *j* by screws *n*. By unfastening the screws *n* and *l* the parts *m* and *j* may be taken off the tank, and the bar G, which, as already stated, is made in two longitudinal halves, can then be taken asunder, allowing the rods F to be lifted out of the tank A, and with them the dovetail-shaped slides H, that carry the eyes *i*. This construction of parts has here been particularly referred to because it has the advantage of allowing the mechanism to be taken out of the tank for cleaning purposes, which is essential in all apparatus for manipulating mustard, which is apt to oxidize under the influence of air. Such apparatus, therefore, must be frequently cleaned, and should not be arranged in properly-constructed machinery otherwise than so that it can easily be taken and washed when needed.

The upper end of each rod F is connected by a cord or chain, *o*, that passes over suitable rollers, *p*, which are hung on rods *g*, that have their bearings in the posts *j*, and the outer ends of these cords or chains *o* are connected to the upper ends of vertical slides I, that move in one or more perforated brackets, *r* and *s*, which are attached to the outer side of the tank, as shown. The several slides I below the lower bracket, *s*, pass also loosely through a bar, J, and have pins or shoulders *t* below said bar J. The several parts are so spaced that when the weights *h* of the rods F cause the plugs *g* to close the apertures *e* the bar J will be raised by the pins or shoulders *t* nearly against the lower side of the lower bracket, *s*. The bar J is connected by a stem, *u*, which is guided in a vertical eye, *w*, with a handle, *x*; or the bar J may have the handle *x* directly attached to or formed on it.

Instead of dovetailing the slides H into the inner side of the tank, they may be held from lateral displacement by rabbets or otherwise.

The pins *t* should project from the slides I sufficiently far to carry them beyond the breadth of the bracket *s*, so that they may constitute handles by which the slides I can be separately moved. These projecting pins *t* are clearly shown in Fig. 4.

The operation of the apparatus is as follows: Mustard having been placed into the tank A, and a row of bottles, held in the rack E, having been carried beneath the row of apertures *e*, the attendant presses the handle *x* down from the position shown in full lines in

Fig. 3 to the position shown by dotted lines in the same figure, thereby lifting the plugs *g*, opening the apertures *e*, and allowing the mustard to flow from the tank into the row of bottles. When the bottles in the row are all full the handle *x* is let go, whereupon the weights *h* will immediately carry the plugs *g* down and close the apertures *e*. A fresh row of bottles is then moved beneath these apertures *e* and the operation just described repeated. The bottles to be filled are in full sight of the attendant, and if he should find that some of the bottles in a row have been properly filled, but for some reason one or more of the bottles in said row are not properly filled, he will let the handle *x* go, and then with his finger pull on the pin *t* of the slide I, that controls the plug *g*, which is over the bottle that has not been properly filled, and then allow the mustard to flow into that particular bottle without permitting the remaining bottles to overflow. In Fig. 1 is shown the hand of the operator pulling one of the slides I in the manner last mentioned. When the bottles which are on one of the racks E have all been filled with mustard, another rack having such bottles is slid on the rails *a* and brought into position, and the machine then operated, as already stated.

It is evident that, instead of being used to fill mustard into bottles, the apparatus can be used for analogous purposes—that is to say, for filling liquid or semi-liquid matter into other receptacles.

I claim—

1. In apparatus for filling bottles or other receptacles from a tank, A, the combination of said tank, having a row of apertures, *e*, with plugs *g*, weighted rods F, cord *o*, outer slides, I, bar J, having handle *x*, and with a support for the vessels to be filled, substantially as described.

2. The combination of the tank A, having apertures *e*, with the weighted rods F, cord *o*, slides I, one or more brackets, *r s*, handles *t*, bar J, and handle *x*, all arranged to allow the separate and also simultaneous lifting of the plugs *g*, substantially as specified.

3. The tank A, having removable bars H, which carry guide-eyes *i*, in combination with the weighted rods F, having plugs *g*, and with mechanism for removing said rods, substantially as described.

4. The mustard-filling apparatus having detachable superstructure *j m*, combined with the separable guide-bar G, removable guide-bars H *i*, and with mechanism for moving the rods F, that are guided in the bar G, and eyes *i*, substantially as described.

JACOB GULDEN.

Witnesses:

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WILLIAM H. C. SMITH.