No. 694,415. Patented Mar. 4, 1902.

W. M. PHELAN.

BOTTLING TABLE.

(Application filed May 8, 1901.)

(No Model.) 2 Sheets—Sheet 1.

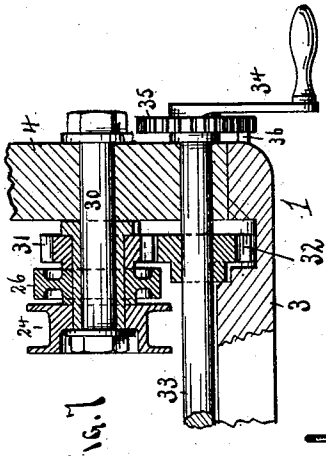


Fig. 1.

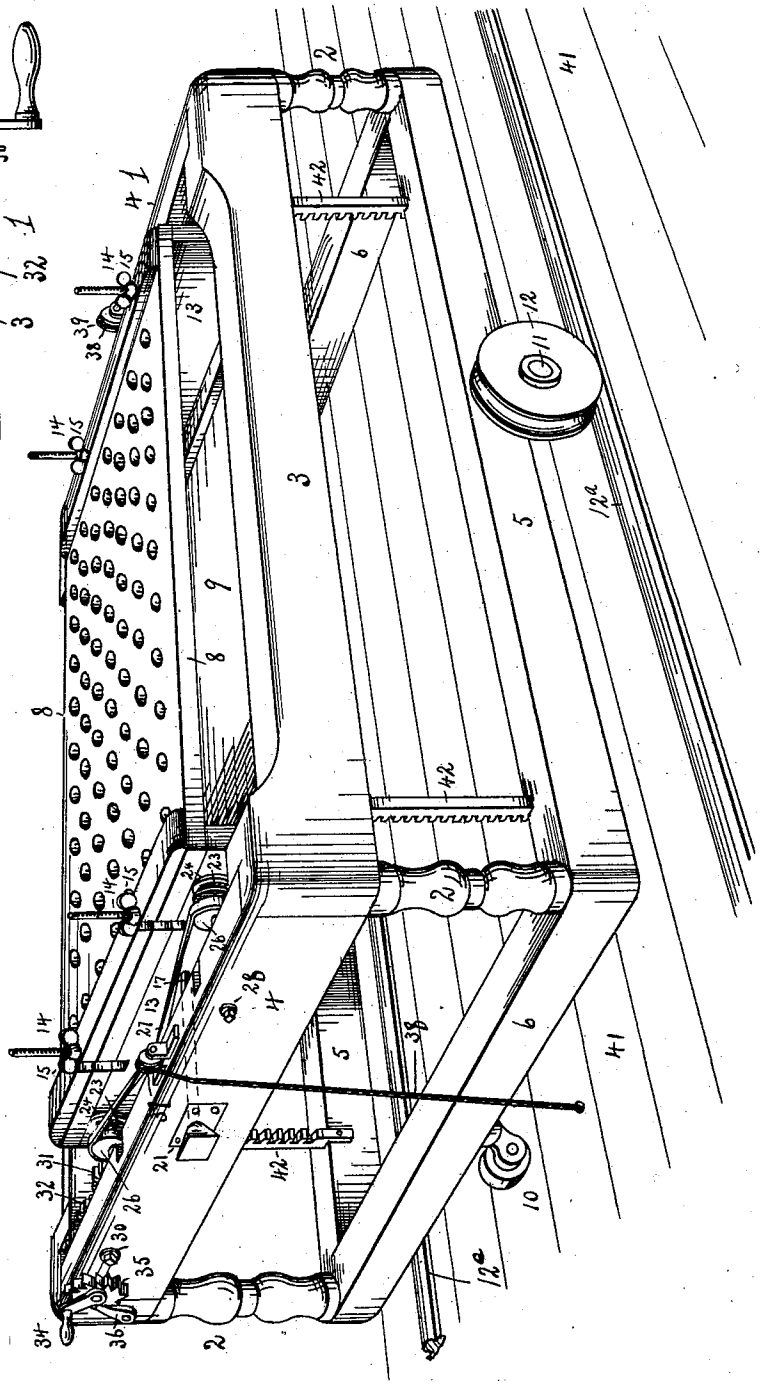


Fig. 1.

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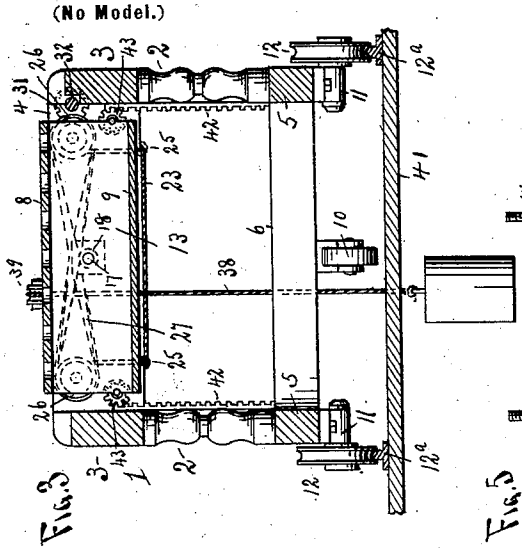


Fig. 3.

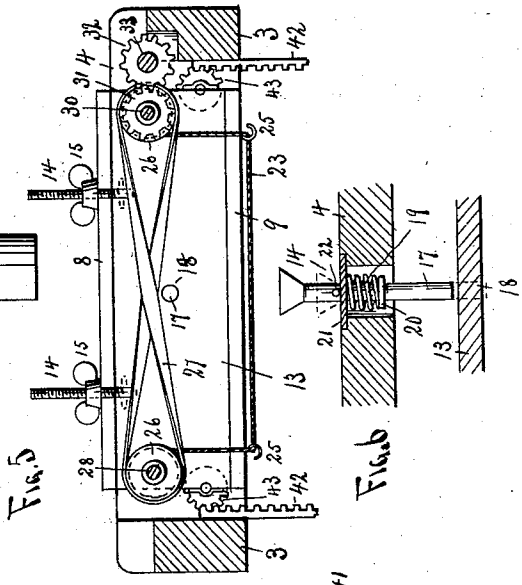


Fig. 5.

Fig. 6.

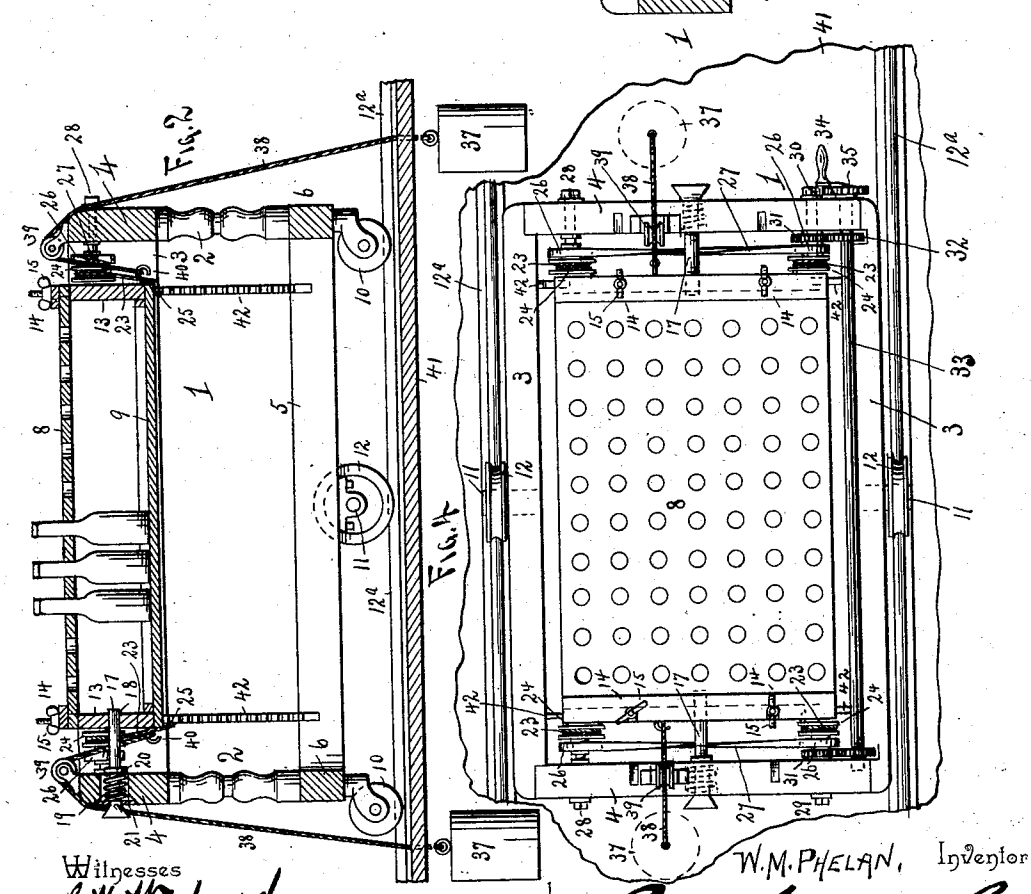


Fig. 4.

Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM MICHAEL PHELAN, OF OSCEOLA MILLS, PENNSYLVANIA.

BOTTLING-TABLE.

SPECIFICATION forming part of Letters Patent No. 694,415, dated March 4, 1902.

Application filed May 8, 1901. Serial No. 59,311. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MICHAEL PHELAN, a citizen of the United States, residing at Osceola Mills, in the county of Clearfield and State of Pennsylvania, have invented a new and useful Bottling-Table, of which the following is a specification.

The invention relates to improvements in bottling-tables.

The object of the present invention is to improve the construction of bottling-tables and to provide a simple and comparatively inexpensive one having a pivotally-mounted top adapted to be reversed to invert the bottles for draining and cleaning and to arrange them in an upright position for filling and capable of being moved vertically to lower the bottles to a washing apparatus and to elevate them for filling after they have been cleaned and dried.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a bottling-table constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a central transverse sectional view. Fig. 4 is a plan view. Fig. 5 is a transverse sectional view on the line 5 5 of Fig. 4. Fig. 6 is a detail sectional view illustrating the construction of the pivots. Fig. 7 is an enlarged detail sectional view illustrating the arrangement of the gearing for connecting the drums with the longitudinal shaft.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a table-frame provided with corner-posts 2 and having side and end bars 3 and 4 at its top, and the said legs are also connected by side and end bars 5 and 6, arranged at the lower ends of the legs. The table-frame has an opening extending entirely through it from top to bottom, the top bars or rails 3 and 4 and the bottom bars 5 and 6 forming rectangular spaces for a pivotally-mounted vertically-movable top having trays 8 and 9 adapted to hold bottles in an inverted position for draining and in an upright position for filling them with beer or other beverages. The frame of the table is provided at its ends with caster-wheels, and it has side wheels 12 mounted on stub-axles 11 and having grooved treads or peripheries for the reception of the rails 12^a of a track. The wheels 10 and 12, which support the table, enable the latter to be readily moved from one place to another, and in practice the table will be moved along the track to carry the bottles from washing and drying apparatus to a suitable filling apparatus. (Not shown.)

The trays 8 and 9 are detachably secured to pivoted bars 13 by removable fastening devices 14, preferably consisting of bolts provided with nuts 15 and pivoted to the bars 13 and adapted to swing inward and outward to engage either the ends of the trays 8 and 9 or the end bars 4 of the frame of the table, as described in Patent No. 665,976, granted to me January 15, 1901. The bars 13 are centrally connected with the top end bars 4 of the frame by bolts 17 engaging suitable sockets or openings 18 of the said bars 13 and held in engagement with the same by coiled springs 19. The coiled springs 19 are disposed on the bolts 17 and are interposed between suitable stops 20 and plates 21 of the top bars 4, which are recessed to receive the plates 21 and the springs. The said bolts 17 are longitudinally movable to enable them to be withdrawn from the bars 13, as indicated in Fig. 6 of the accompanying drawings, and they are held out of such engagement by means of pins or keys 22 passing through perforations of the bolts 17 and adapted to engage the outer faces of the plates 21. The top of the table is adapted to be rotated on the pivot-bolts 17, as described in the said patent, to arrange the bottom in an inverted position for washing and draining and to bring them to an upright position for filling after they have been dried. The table is designed to be moved along the track to a suitable washing apparatus, (not shown,) and the bottles will then be inverted and the top of the table will be lowered to the floor or to such washing apparatus by means of hoisting mechanism consisting of ropes 23 or other flexible connections, drums 24, and means for simultaneously rotating the drums for raising and lowering the top of the table after

the pivot-bolts have been withdrawn from the sockets or openings 18. The drums 24, which are arranged in pairs at the ends of the top of the table, receive the ends of the ropes 23, each rope extending across one end of the table and having its ends suitably secured to the adjacent drums. The rope 23 is designed to be connected between its ends with the adjacent end of the top of the table, preferably by means of hooks 25, designed to be arranged either at the top or bottom of the top of the table and detachably engaging the rope and adapted to permit the same to be removed when it is desired to rotate the top of the table. The drums are mounted upon suitable shafts and are connected with pulleys 26, arranged in pairs and receiving crossed belts 27, which cause the drums to simultaneously wind up and unwind the ropes or flexible connections 23; but instead of employing belts and pulleys chains and sprocket-wheels or any other form of gearing may be used for this purpose. The drums and pulleys are mounted on short shafts 28, 29, and 30. The short shafts 28, which are located at one side of the frame of the table, are fixed to the adjacent ends of the bars 4 and the shafts 29 and 30 are located at the opposite side of the table. The shafts 29 and 30 receive pinions 31, which are connected with the adjacent pulleys and drums and which mesh with gears 32 of a longitudinal shaft 33. The shaft 33, which extends the entire length of the table, projects from one end thereof and is provided with a crank-handle 34 and has a ratchet-wheel 35 mounted upon it. The ratchet-wheel 35, which is engaged by a pawl 36, is arranged on the exterior of the table adjacent to the crank-handle, the pawl and ratchet being adapted to lock the top of the table at any desired adjustment when the said top is supported by the hoisting apparatus.

In order to assist the raising of the top of the table, supplemental or counterbalancing weights 37 are employed, and these weights are provided with ropes 38 or other suitable flexible connections, which are adapted to pass over guide-pulleys 39 and be connected to the ends of the top of the table. The top of the table is provided at its ends with hooks 40 or other suitable fastening devices, and the ends of the flexible connections 38 are provided with suitable loops or eyes for engaging the hooks. The top of the table when filled with bottles may be readily lowered without the use of the counterbalancing-weights; but the latter may be employed for this purpose to relieve the hoisting mechanism of strain. When it is desired to raise the top, the counterbalancing-weights are connected with it, and the hoisting mechanism may then be easily operated. These counterbalancing-weights are designed to be located beneath the floor 41 or other support for the table, and in practice they will be arranged at intervals or adjacent to the washing, drying, and filling apparatus to enable them to be readily connected with the top of the table. When the table is to be moved along the track, the counterbalancing-weights are detached by disconnecting the loops or eyes of the flexible connections 38 from the hooks 40 of the top of the table.

The frame of the table is provided at its ends with vertical rack-bars 42, arranged in pairs and adapted to receive pinions 43, which mesh with the rack-bars, and by this construction the top of the table is guided in its vertical movement and is evenly raised and lowered, so that it will assume a horizontal position at all times. The pinions 43, which are arranged at the ends of the top of the table, are mounted on the bars 13 at the ends thereof, as clearly illustrated in Fig. 3 of the accompanying drawing. The guide-pulleys 39 are mounted in suitable brackets and are located at one side of the pivot-bolts; but the rack-bars will prevent the top of the table from being canted or tilted by reason of this arrangement of the weights. The cords or ropes, which are connected with the counterbalancing-weights, extend through suitable openings of the floor or support 41 and will not be in the way when not in use. The entire bottom of the frame of the table is open, so that when the table is run over an opening of the floor or support 41 free access will be had to the bottles.

It will be seen that the bottling-table is adapted to be readily handled, that the top, which is pivotally mounted, is adapted to be rotated, and that it is also capable of being readily raised and lowered to arrange it at the top or bottom of the frame.

The top of the table is constructed as shown and described in the said patent, the tray 8 being provided with openings or apertures to receive the necks of the bottles. The bottles, which are arranged between the trays 8 and 9, are securely held in place and may be inverted by rotating the top. The trays are removable, and the bottles may be placed in the top when either of the trays is removed, and when one of the trays is removed for supplying the top with bottles or for taking them therefrom the said top will be locked against rotation by engaging the fastening devices 14 with the end bars 4 of the frame.

Another advantage of the invention is that after the bottles have been placed in the top of the table they do not have to be removed during the process of bottling, including soaking, washing, filling, stoppering, and steaming, and the table may be constructed for handling any desired number of bottles.

What I claim is—

1. A table comprising an open frame, a top mounted within and adapted to move through the open frame, pivots detachably engaging the top and adapted to permit the same to be rotated, and hoisting mechanism connected with the top for raising and lowering the same, substantially as and for the purpose described.

2. A table comprising an open frame, a top arranged within and adapted to move through the open frame and provided with a pair of trays and adapted to receive bottles, pivots mounted on the frame and detachably engaging the top, and hoisting mechanism for raising and lowering the top when the pivots are withdrawn, substantially as described.

3. A table comprising an open frame, a top arranged within and adapted to move through the open frame, pivots detachably engaging the top, drums arranged in pairs and located at the ends of the top, flexible connections arranged on the drums and detachably secured to the top, and means for rotating the drums, substantially as described.

4. A table comprising an open frame, a reversible top arranged within and capable of vertical movement through the open frame, means for detachably pivoting the top to the frame, and hoisting mechanism detachably connected with the top, substantially as described.

5. A table comprising an open frame, a reversible top detachably pivoted within the frame and adapted to move through the same, and means for raising and lowering the top, substantially as described.

6. A table comprising an open frame, a top arranged within the open frame and adapted to move through the same, pivots supporting the top, drums arranged in pairs at the ends of the table, flexible connections arranged on the drums and detachably secured to the top, gearing connecting the drums of each pair, and means for operating the gearing, substantially as described.

7. A table comprising an open frame, a reversible top arranged within and adapted to move through said frame, drums arranged in pairs at the ends of the top, flexible connections extending across the table and secured to the top and connected with the drums, gearing connecting the drums of each pair, a longitudinal shaft arranged at one side of the table, gears connecting the shaft with the said gearing, and means for operating the shaft and for locking the top of the table in its adjusted position, substantially as described.

8. A table comprising a frame, a reversible top, the short shafts arranged in pairs at the ends of the table, the drums mounted on the short shafts, flexible connections arranged on the drums and connected with the top of the table, pulleys arranged on the said short shafts and connected with the drums, the crossed belts connecting the pulleys, the longitudinal shaft arranged at one side of the table, and gearing connecting the longitudinal shaft with the adjacent pulleys, substantially as described.

9. A table comprising an open frame, a reversible top arranged within and adapted to move through the open frame, rack-bars arranged at opposite sides of the frame, pinions mounted on the top and meshing with the rack-bars, and means for raising and lowering the top, substantially as described.

10. A table comprising an open frame, a reversible top arranged within and adapted to move through the open frame, means for raising and lowering the top, and the counterbalancing-weights having flexible connections detachably secured to the top, substantially as described.

11. A table comprising an open frame, a reversible top arranged within and adapted to move through the open frame, pulleys mounted on the frame, the counterbalancing-weights having flexible connections arranged on the pulleys, and secured to the top, and means for raising and lowering the top, substantially as described.

12. A table comprising an open frame, a reversible top capable of vertical movement through the said frame and located within the same, means for raising and lowering the top, rack-bars mounted on the frame, pinions carried by the top and meshing with the rack-bars, and the counterbalancing-weights connected with the top, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM MICHAEL PHELAN.

Witnesses:
A. W. BAIRD,
MAGGIE ADELSPERGER.