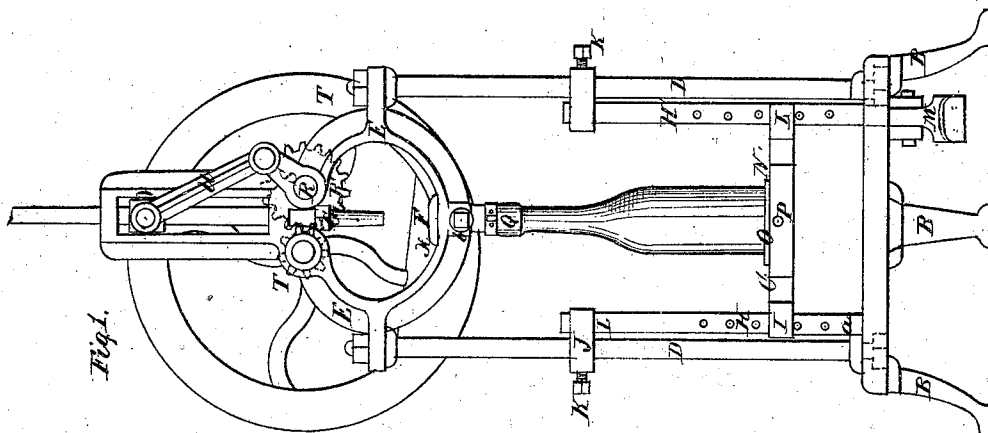
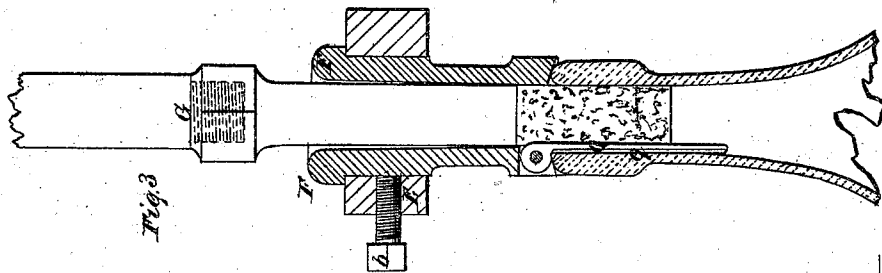
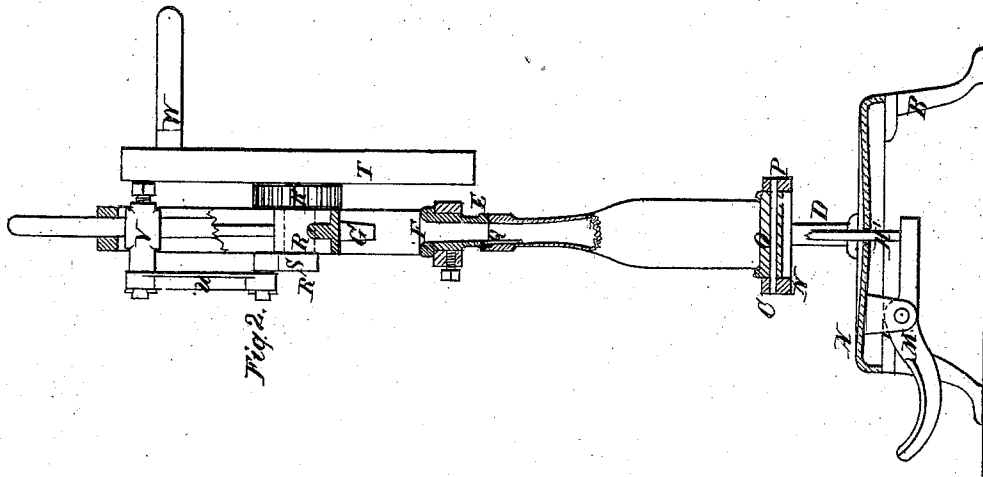


D. Mueller,
Bottle Corking Mach.
No. 113,326. *Patented Apr. 4. 1871.*



Witnesses:
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Letters Patent No. 113,326, dated April 4, 1871.

IMPROVEMENT IN MACHINES FOR CORKING BOTTLES.

The Schedule referred to in these Letters Patent and making part of the same.

I, DAVID MUELLER, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Corking Bottles, of which the following is a specification.

This invention comprises, first, the peculiar arrangement and combination of the cork-plunger, a crank and pitman, and a balance-wheel with a counter-balance, by which means the cork-plunger is operated with a progressive power in harmony with proceeding of driving home the cork, while by the said means the plunger is caused to stop in raised position, ready for the succeeding operation, out of the way of the operator's fingers in placing the cork, so that the operator is relieved from setting and raising the plunger, and does not require the additional power for final driving home the cork and particular care for his fingers in setting the cork.

It comprises, secondly, the peculiar manner of constructing and combining the cork-needle, the frame, and parts for operating the bottle, by which means said needle remains attached, and said parts are produced and made properly operative and durable for less expense than with the construction now used in those machines.

In the annexed drawing—

Figure 1 represents a front elevation of the machine constructed according to my invention, and shown in position when the bottle has been placed in the machine to receive its cork.

Figure 2 is a vertical central section of the same.

Figure 3 is a detached vertical section of the cork-guide, or bush and plunger, shown relative with the neck of a bottle in position when the cork has been placed or driven home, and shown on a larger scale than in the former views, to exhibit the same clearly.

A represents the table or bed-plate upon which are arranged the working parts for adjusting the bottle.

It is supported on the legs B B B, and it has secured to each side of the bottle-support C an upright column or rod, D, which serves to support a cross-piece, E, to which the cork-guide or bush F and the cork-plunger G, with its mechanism for operating the same are attached.

The table A and cross-piece E are made with corresponding holes, through which the ends of the rods D D pass, and they have screw-threads and nuts on their ends to secure said table and cross-piece in proper manner together.

The top ends of the legs B B B are formed with dove-tail-shaped flat parts for locking them in corresponding projections or lugs on the under side of the table A.

On the inside of each rod, D, is attached a vertical bar, H, between which the bottle-support C is guided, the latter having for that purpose slotted ends easily passing up or down on said bars H.

To hold the upper ends of said bars H H I employ the horizontal couplings J J, which have each on one end an opening to fit over the bar D, and a set-screw, K, to secure said end to the rod D permanently. The other end of each of said couplings has an opening allowing the bar H to pass. The lower ends of the bars H H are loosely fitted in the bed or table A.

Both of said bars have several pin-holes along their length, in which the pins I I are fitted, upon which the support C rests, so that, by setting said pins in holes more or less above the table, the support C is ready adjusted to suit the length of the desired bottle to be operated upon.

The bar H to the left hand remains stationary, and has a shoulder, a, stopping upon the table.

The bar H, to the right, rests upon the end of the foot-lever M, which has its fulcrum stationed in lugs cast on the under side of the table; and the said bar can be raised and lowered, and with it the end of the support resting on its pin I, by means of the said foot-lever M, by which means the corked bottle is lowered from the cork-guide and the succeeding bottle to be corked is adjusted to the guide.

In order to provide an even bearing on the bottom of the bottle while receiving its cork, I make the support C with a large circular central opening, N, in which I pivot a small platform, O, made of wood or other suitable material to rest the bottle upon, and its pivot P is passed in the direction across the support.

The cork-guide F is secured in the cross-piece E by means of a set-screw, b, so that it may be readily exchanged with one of a different bore, suitable for a different-sized neck of bottle.

Q represents the cork-needle. It is hinged to the guide F in manner to be easily detachable.

It has a groove, g, along its side bearing against the neck of the bottle, to permit the air and surplus contents of the bottle to escape while the cork is driven home.

The guide F is made a little smaller than the neck of the bottle, or sufficiently small in its bore to provide for the corked bottle being easily withdrawn from the needle Q, which operation is done quickly, before the cork has time to swell tightly in the neck of the bottle.

Several guides, F, with corresponding bore to meet the differently-sized necks of bottles operated upon, are furnished with each machine.

The top portion of the cross-piece E has two eyes centrally, one considerably above the other, and located in line with the guide F, so that the cork-plunger G, which is fitted to slide therein, will meet the bore of the said guide F when slid down.

For the purpose of operating, raising and lowering the

plunger G, I employ a horizontal shaft, R, which has a crank, S, upon its end; and on the plunger-rod I have a stud, V, located between the guides of said rod, upon which stud a pitman, U, is fitted, connecting said stud with the pin of the crank S, upon which the opposite end of said pitman is fitted; and to rotate the shaft R I employ upon its end, opposite to that to which the crank S is secured, a cog-wheel, R', and employ a hand-wheel, T, provided with a pinion, T', on its hub, and provided with a handle, W, on the rim of it; and have said hand-wheel fitted upon a stud secured to the cross-piece E and located in proper relation with the shaft R and cog-wheel R' to have the pinion T' gear in said cog-wheel in proper manner.

To the hand-wheel T I cast or attach a counter-balance-weight, X, on that part of its rim which is downward when the crank S and plunger G are in raised position, as shown in fig. 1. By means of taking hold of the handle W and turning the hand-wheel T, the shaft R is rotated and the plunger G forced down and, by means of the counter-balance, said plunger is raised and stops in raised position, ready for the successive operation of corking.

The bearing of the shaft R is cast on the cross-piece E, as shown.

The guide F has its bottom edge or face meeting the neck of the bottle made concave, as shown in fig. 3, for the purpose of adjusting the neck of the bottle to the bore of the guide with facility and in a ready manner.

When the operator commences corking he places the bottle on the platform O. With the pressure of his

foot he adjusts the neck of the same in the concave face of the bottom end of the guide F. With his right hand he takes hold of the handle W; with his left hand he places the cork in the top of the guide F. By turning the wheel T the plunger G is forced down, forcing the cork in the neck of the bottle. By means of the balance X the plunger is raised and remains ready for the next bottle. The operator relieves the foot-lever M, removes the corked bottle, and places one to be corked, and proceeds as described.

It will be observed, the needle Q being hinged to the guide F, it requires no extra labor in placing the same.

Claims.

Having fully described my invention,

What I claim therein, and desire to secure by Letters Patent, is—

1. The combination of the plunger G, the hand-wheel T, the crank S, pitman U, gears T' and R', and balance X, when operating as and for the purpose substantially as set forth.

2. The construction of the table A, the rods D D, the support C, the platform O, the bars H H, the couplings J, and treadle M, arranged substantially as and for the purpose described.

3. The needle Q, with the guide F, when pivoted and attached substantially as and for the purpose herein shown.

Witnesses:

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